

Postgraduate Certificate Integration of Drones for Industry and Practical Uses





Postgraduate Certificate Integration of Drones for Industry and Practical Uses

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/engineering/postgraduate-certificate/integration-drones-industry-practical-uses

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

These new ways of flying are generating a multitude of positions from many different sectors, both public and private. It is appropriate to analyze whether they should be regulated, in whole or in part, and in a manner that is harmonized with the rules of other European Union countries. That's why being so relevant in this field of study today, TECH has opened this interesting program, which intends to bring to the Engineering professional the most innovative knowledge related to the performance of inspection work with drones on roads, roads, highways, and bridges. Additionally, this qualification has a 100% online pedagogical format with a team of experienced teachers in drone piloting, offering a first class academic experience.





“

With TECH you will take your engineering career to the top, achieving position with solidity in a highly competitive sector"

The most advanced countries are promoting different research projects with this type of unmanned aircraft. Ranging from the testing of aeronautical equipment in dangerous conditions of ice, wind, heavy rain, etc., avoiding exposure to risks of human equipment in manned flights. In this way, through the displacement and sharing of large loads and even people on commercial flights in unmanned flights. Developing specific technologies such as hydrogen fuel cells that could triple the duration of flights of these devices.

In this way, the different studies and investigations in this field have progressed in the improvement of flight and autonomy, and in this way confirm that the professionals in Engineering will have to be up-to-date in this area of knowledge that is constantly changing. That is why this diploma will provide the professional with a series of updates in the preparation of formats for different purposes: conversion, delivery to the final customer, RRSS.

Students will expand their knowledge on specific items related to managing the images generated in the different scenarios. On the other hand, it is a program with a highly qualified teaching staff. It also contains exclusive audiovisual material of the highest quality that provide a better experience to the professional for its dynamism and comfort with the online modality.

Therefore, TECH focused on academic excellence and comfort, offers first class innovations with the highest standards, therefore being a program of great flexibility by only needing an electronic device with Internet connection to access the Virtual Platform without difficulties from the comfort of the place where you are.

The **Postgraduate Certificate in Integration of Drones for Industry and Practical Uses** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ Practical cases presented by experts in Drone Piloting
- ◆ The graphic, schematic, and practical content with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its 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



At TECH you will continue to expand your knowledge and achieve the latest updates in surveillance and security with drones"

“

TECH offers multimedia content to help you achieve your goals, providing you with dynamism and convenience with the online methodology”

A course that integrates excellent high quality audiovisual content which complements the knowledge acquired.

Innovate with TECH in the area of Drone Pilot, a field that every day brings new updates.

The program's teaching staff includes professionals from the field who contribute their work experience to this educational 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.



02

Objectives

This Postgraduate Certificate in Integration of Drones for Industry and Practical Uses has been primarily oriented to give the professional the latest developments in the field of Engineering. Therefore, TECH provides incredible technological innovation tools, achieving success in the development of the program. At the end of the course, the student will have strengthened their skills and competencies by performing multiple tasks applied to technical and scientific work.





“

TECH provides industry-leading content to help you meet your career goals in less than you think”



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





Specific Objectives

- ◆ Applying specific procedures to aerial filming
- ◆ Design and organize, in order to implement, the most concrete ways of acting. Act in order to obtain the desired final product: images in air and on land; indoor and outdoor
- ◆ 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

“

TECH is excellence and efficiency, offering you innovative tools and the most current content of the academic program"

03

Course Management

TECH is excellence and efficiency, which is why the educational system it offers is top notch for students who attend its programs. In this way, the didactic tools implemented by the institution succeed in carrying out the development of each of its degrees. In this way, the graduate will have access to a content made by a teaching staff specialized in Electronic Engineering and theory and practice of RPA. Its extensive experience and deep knowledge will allow the graduate to resolve and answer questions that arise in the course of the program.





“

Achieve your goals with experienced teachers and the best teaching tools in the current academic landscape”

Management



Mr. Pliego Gallardo, Ángel Alberto

- ◆ Airline Transport Pilot ATPL and RPAS Instructor
- ◆ Drone flight instructor and examiner at Aerocameras
- ◆ 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



Dr. Bazán González, Gerardo

- ◆ Electronic Engineer
- ◆ Founder and CEO of DronesSkycam
- ◆ Senior Managing Consultant at 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 from the University of Birmingham



04

Structure and Content

This university program has been created and developed according to the latest research in the field of Engineering, establishing a curriculum that provides a great content on the Integration of Drones for Practical Uses and Industry. This Postgraduate Certificate is aimed at providing the most advanced knowledge in basic knowledge of pilots and operators for search and rescue missions. All this, by means of the endless audiovisual tools that offer dynamism and a greater attractiveness to this program.



“

With TECH, you have a curriculum that is oriented on bringing you the most exclusive content in Integration of Drones for Industry and Practical Uses”

Module 1. Integration of Drones for Industry and Practical Uses

- 1.1. Advanced Air Photography and Video
 - 1.1.1. The Triangle of Exposition
 - 1.1.2. Histograms
 - 1.1.3. Use of Filters
 - 1.1.4. Camera Settings
 - 1.1.5. Delivered to Clients
- 1.2. Advanced Applications of Photography
 - 1.2.1. Panoramic Photography
 - 1.2.2. Low-Light and Night Shots
 - 1.2.3. Interior Videos
- 1.3. Drones in the Construction Industry
 - 1.3.1. Expectations of the Industry and Budgets
 - 1.3.2. Solutions
 - 1.3.3. Automated Image Taking
- 1.4. Risk Assessment With Drones
 - 1.4.1. Air Inspection
 - 1.4.2. Digital Modes
 - 1.4.3. Safety Procedures
- 1.5. Inspection Work With Drones
 - 1.5.1. Inspection of Roofs and Covers
 - 1.5.2. The Right Drone
 - 1.5.3. Inspection of Paths, Roads, Highways and Bridges
- 1.6. Surveillance and Security With Drones
 - 1.6.1. Principles for Implementing a Program With Drones
 - 1.6.2. Factors to Consider When Buying a Drone for Safety
 - 1.6.3. Applications and Real Uses
- 1.7. Search and Rescue
 - 1.7.1. Education
 - 1.7.2. Data Science
 - 1.7.3. Basic Knowledge of the Pilots and Operators for Search and Rescue Missions



- 1.8. Drones in Precision Agriculture I
 - 1.8.1. Particularities of Precision Agriculture
 - 1.8.2. Normalized Difference Vegetation Index
 - 1.8.2.1. Visible Atmospheric Resistance Index (VARI)
- 1.9. Drones in Precision Agriculture II
 - 1.9.1. Drones and Applications
 - 1.9.2. Drones for Monitoring in Precision Agriculture
 - 1.9.3. Techniques Applied in Precision Agriculture
- 1.10. Drones in Precision Agriculture III
 - 1.10.1. Image Acquisition Process for Precision Agriculture
 - 1.10.2. Process of Photogrammetry and Application of the Visible Atmospheric Resistance Index
 - 1.10.3. Interpretation of the Vegetation Indices

“

The quality Contents you find in this Postgraduate Certificate is the key to make your learning successful, as well your professional career”

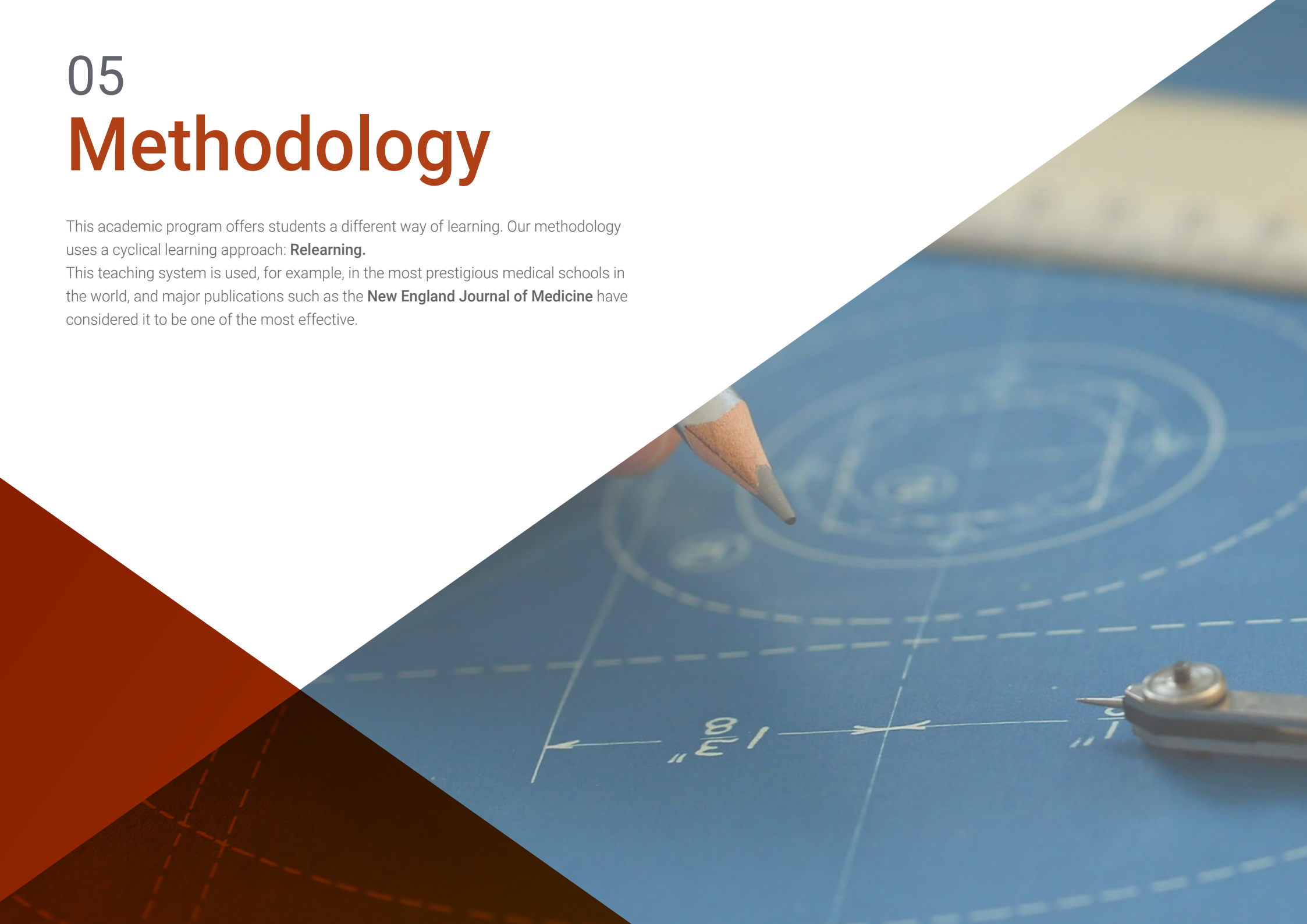


05

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.



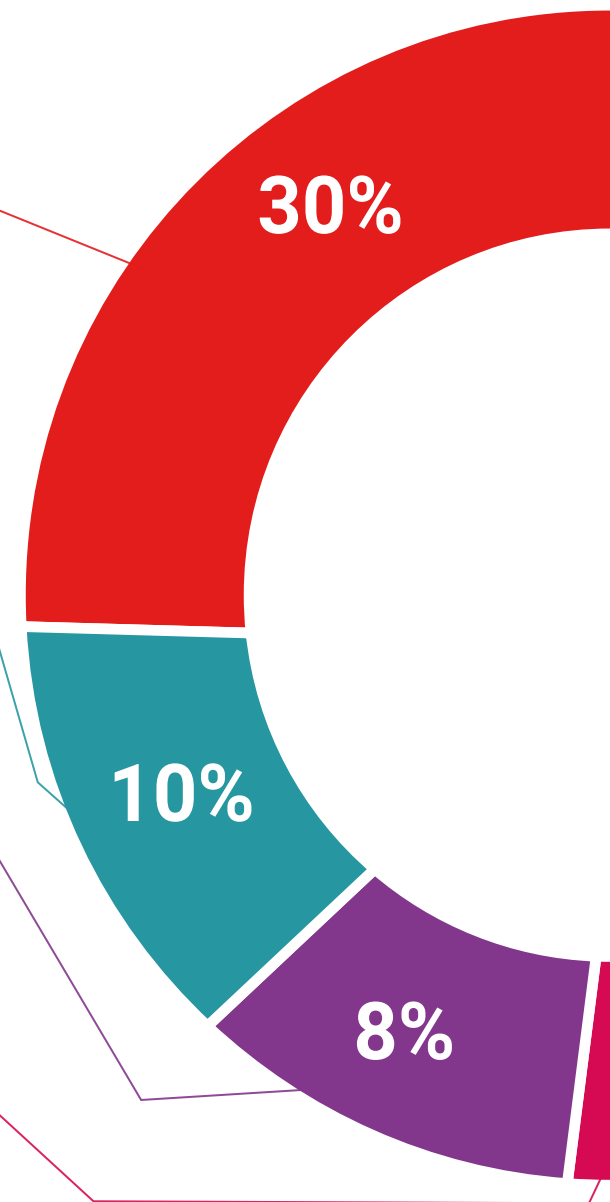
Practising Skills and Abilities

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 Certificate in Integration of Drones for Industry and Practical Uses guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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

This **Postgraduate Certificate in Integration of Drones for Industry and Practical Uses** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Integration of Drones for Industry and Practical Uses**

Official Nº of Hours: **150 h.**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION 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
development language
virtual classroom



Postgraduate Certificate Integration of Drones for Industry and Practical Uses

- › Modality: online
- › Duration: 6 weeks
- › Certificate: TECH Technological University
- › Dedication: 16h/week
- › Schedule: at your own pace
- › Exams: online

Postgraduate Certificate Integration of Drones for Industry and Practical Uses

