

# Postgraduate Diploma Aeronautical Operations



## Postgraduate Diploma Aeronautical Operations

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 24 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-aeronautical-operations](http://www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-aeronautical-operations)

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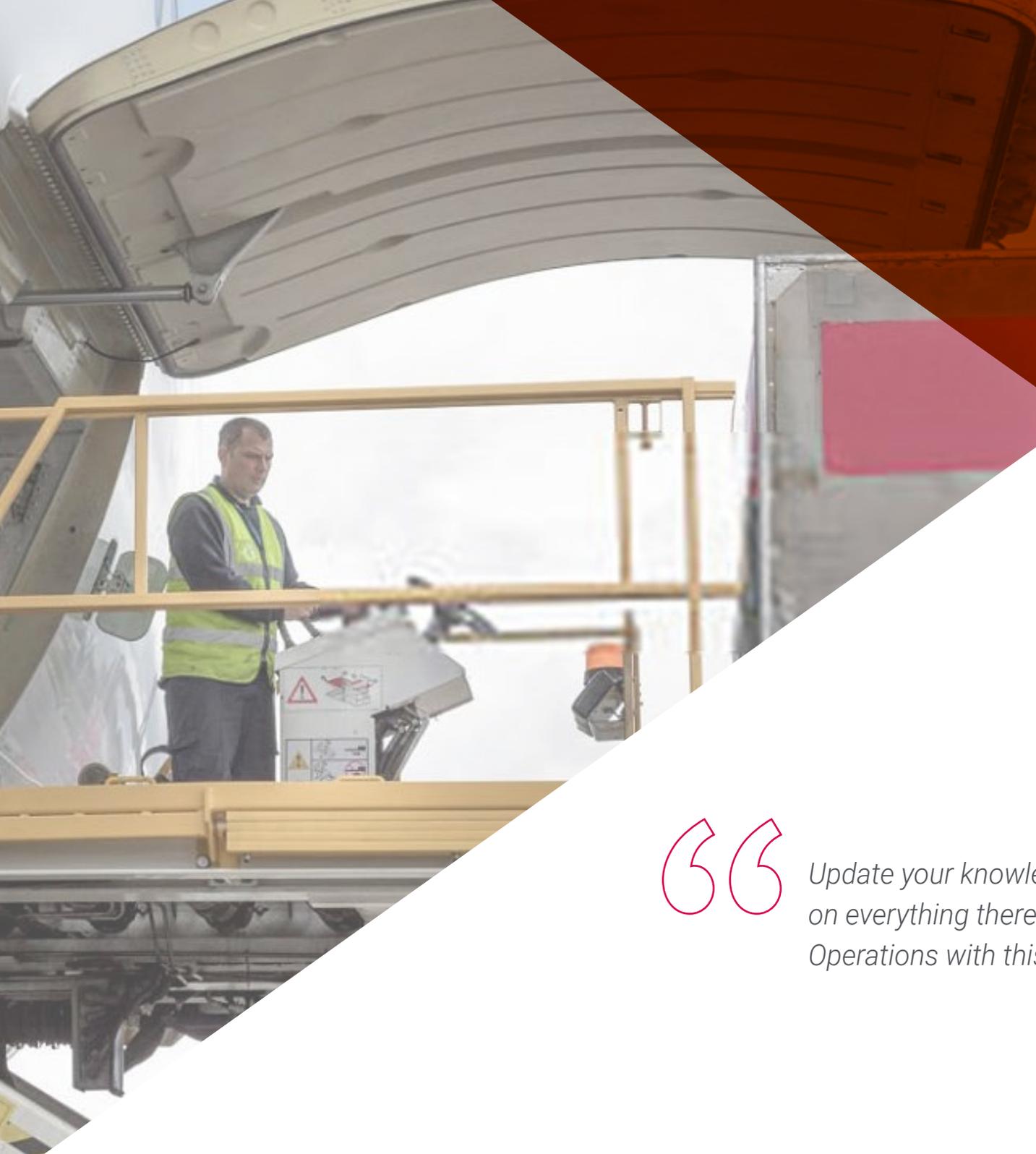
# 01

# Introduction

Over the years, Aeronautical Operations has been developing new protocols and management systems that ensure that society can fly in an increasingly simple and safe way. In fact, in a scenario in which air connectivity is the most used means of transport for long trips, it is convenient that there are excellent professionals in the sector updated on the latest developments. This educational program, totally online, is designed so that experts in this field can keep updated or enter, in a simple way, in the field of Aeronautical Operations, in the most practical and comfortable way.



7050 KG MAX.  
15500 LB MAX.



“

*Update your knowledge and acquire knowledge on everything there is to know about Aeronautical Operations with this fully online program"*

Aeronautical operations have changed as security protocols, regulations and even the way flights are managed have changed. That is why professionals in this field are obliged to keep up to date with the latest trends, in order to be able to offer management services, design or direction of projects and areas, in accordance with the current requirements.

This Postgraduate Diploma in Aeronautical Operations provides an in-depth study of issues related to signaling, beaconing and airport lighting. Therefore, as well as the lighting needs of runways. It also emphasizes the different types of lights and those issues that have to do with important aspects of the luminosity of the "air side" of the airport.

The program also delves into the airport manual. This document is the most relevant and starting point of an airport infrastructure as it contains all the areas that exist in it and is the main contractual document to be taken into account for its operation. The study plan continues with a tour of the protocols of airport operations themselves and, of course, those considered special, such as emergency plans or obstacle control.

Finally, a module dedicated to multi-management in airports is devoted to the existence of the Airport Regulation Document, as well as safety management systems and their scope, environmental impact reports or budgetary issues, among others.

This program is offered in online mode and makes available all the teaching resources and multimedia material on the virtual platform. Students can progress through the content at their own pace, only requiring an internet connection and an electronic device from which to connect.

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

- ◆ The development of case studies presented by experts in Aeronautical Operations
- ◆ 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
- ◆ 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



*Learn how to create and manage the airport manual, the most important document and starting point for the operation of these infrastructures"*

“

*Become an expert in airport multi-management with the expertise of the teachers of this program, prestigious professionals in the sector who will give you the keys”*

The program's teaching staff includes professionals from sector 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 throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You only need an internet connection and an electronic device to take this Postgraduate Diploma in a fully online mode.*

*Specialize your knowledge in Aeronautical Operations in the most comfortable way with this online Postgraduate Diploma.*



# 02 Objectives

This Postgraduate Diploma provides the notions and knowledge necessary to become a true expert in signage and beaconing on airport runways, as well as in aeronautical operations, whether complex or simple in nature. It also enables professionals to master the airport manual, the starting point for the operation of airport infrastructures, as well as in multi-management (environmental impact, budget, human resources, etc.).





“

*Become a versatile Aeronautical Operations professional and learn how to manage everything related to them"*



## General Objectives

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- ◆ Provide the professional with the specific and necessary knowledge to perform with a critical and formed opinion in any phase of planning, design, construction or operation of the airport
- ◆ Determine the problems of airport design and look for solutions adjusted to the airport's needs
- ◆ Master the main constraints involved in an airport project
- ◆ Acquire a specialized approach and be able to monitor the management of any airport department
- ◆ Apply the latest techniques used in the industry today
- ◆ Outline the new trends that airports plan to implement in the post-COVID era
- ◆ Expand your knowledge of the different critical and common airside infrastructures and their design



*Get ready to be a sought-after professional in your industry, this program will make your resume much more eye-catching"*





## Specific Objectives

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### Module 1. VPAs and Non-VPAs at the Airport

- ◆ In-depth depth horizontal runway markings, taxiways, apron horizontal markings, anywhere on the airfield
- ◆ Identify in depth runway, taxiway, apron and airfield lighting systems
- ◆ Detail the types of signs usable on an airfield
- ◆ Design the airfield signage information system
- ◆ Know the requirements for matching AAVV and radio aids
- ◆ Identify apron lighting requirements
- ◆ Monitor compliance with lighting requirements

### Module 2. Operations Manual

- ◆ Master the contents of the airport manual
- ◆ Delve into the content of the access control procedure
- ◆ Master the content of the procedure for the control of inspections of the movement area of movement
- ◆ Know the contents of the procedure for work on the aerodrome
- ◆ Identify the contents of the apron management procedure
- ◆ Recognize the content of the wildlife hazard management procedure
- ◆ Know the content of the surface and protection area control procedure
- ◆ Master the content of the procedure for the transfer of disabled aircraft
- ◆ Know the content of other procedures affecting operation and exploitation (maintenance, degraded atmospheric conditions, and aircraft operations beyond those authorized)

### Module 3. Airport Operations

- ◆ Delve into the categorization of the operations that take place at the airport
- ◆ Learn about the singularity of helicopter operations
- ◆ Delve into the problematic of the existence of special operations
- ◆ Examine the apron safety regulations governing ground activities
- ◆ To master the functions and requirements of the airport firefighting service
- ◆ Know the scope, interconnections with other documents, and action requirements of the emergency plan
- ◆ Delimit the main services provided by or at the airport to airlines
- ◆ Interrelate the administrative classification of Handling
- ◆ Delve into the structure and scope of the main Safety programs in place at the airport
- ◆ Determine the activities planned at the airport to carry out an adequate obstacle control

### Module 4. Multi-Management

- ◆ Examine the existence and scope of the airport regulatory document, as well as the operational safety management systems
- ◆ Examine the existence and scope of environmental management systems
- ◆ Determine the existence of the quality system and processes, safety management systems and their scope
- ◆ Delve into the existence of CGA and CEOPS management centers and their functions
- ◆ Know the particularities of the network operation and its impact on the HR involved
- ◆ Detail the annual budgets
- ◆ Identify the particularities of the change management process for the maintenance of the airport certificate

# 03

# Course Management

Professionals of the highest prestige in the sector are part of the select management and teaching staff of this Postgraduate Diploma. With extensive professional and teaching experience, they teach this educational program with the best guarantees for the students. The teachers of this study plan accompany the students throughout the learning process, applying an updated syllabus and adjusted to the latest advances in airport infrastructures.



“

*Be an up-to-date professional in your field, capable of managing and handling the Aeronautical Operations of an airport"*

## Management



### **D. Moreno Merino, Rafael**

- ♦ High Speed Projects Technician. Risk Assessment Expert at INECO
- ♦ Airport Maintenance Project Manager at INECO
- ♦ Engineer at INECO
- ♦ Director of the Master's Degree in Project, Construction and Operation of Airport Infrastructures
- ♦ Head of Occupational Risk Prevention and Production at ACCIONA
- ♦ Professional Master's Degree in Business Administration at Polytechnic University of Madrid
- ♦ Professional Master's Degree in Business Administration from Polytechnic University of Madrid
- ♦ Degree in Civil Engineering from the Catholic University of San Antonio de Murcia



# 04

# Structure and Content

This Postgraduate Diploma in Aeronautical Operations has a perfectly structured content as it is designed to introduce the student, in only 4 modules, to the issues related to the management and control of Aeronautical Operations, the exterior of an airport and the main elements on which it depends. Therefore, one section is devoted to understanding signaling and beaconing in its entirety. Another is introduced in depth on the subject of the airport manual. Finally, a much more detailed explanation of Aeronautical Operations and airport multi-management is given.





“

*Learn, with a perfectly structured and organized content, everything related to Aeronautical Operations”*

## Module 1. VPAs and Non-VPAs at the Airport

- 1.1. Horizontal Runway Marking
  - 1.1.1. Threshold Signal
  - 1.1.2. Runway Designator Sign
  - 1.1.3. Track Shaft
  - 1.1.4. Side Girdle
  - 1.1.5. Contact Zone
  - 1.1.6. Waiting Point Signs
  - 1.1.7. Other Signs on the Runway
- 1.2. Horizontal Signaling in Filming
  - 1.2.1. TCL Taxiway Axle Signal
  - 1.2.2. Improved Signal
  - 1.2.3. Edge Signal
  - 1.2.4. Waiting Point Signs INTERMEDIATE
  - 1.2.5. Other Signs on the Filming
- 1.3. Horizontal Signaling in Platform
  - 1.3.1. Edge Signal
  - 1.3.2. ABL Safety Line
  - 1.3.3. Equipment Restriction Area Sign
  - 1.3.4. Signal Equipment Waiting Area
  - 1.3.5. Parking Stall Signs
  - 1.3.6. Post Entry Signal
  - 1.3.7. Pedestrian Path Sign
  - 1.3.8. Other Signs on the Filming
- 1.4. Signs
  - 1.4.1. Aircraft Signs. Information
  - 1.4.2. Aircraft Signs. Obligation
  - 1.4.3. Vehicle and Pedestrian Signs
- 1.5. Signs and Signs at Heliports
  - 1.5.1. Signs on Elevated Heliports
  - 1.5.2. Signals on Surface Heliports
  - 1.5.3. Helicopter Parking Sign
- 1.6. Visual Aids on the Track. Light
  - 1.6.1. Axle Lights
  - 1.6.2. Threshold and End Lights
  - 1.6.3. PAPIs
  - 1.6.4. Approach Lighting System
  - 1.6.5. Windsocks
  - 1.6.6. Other Visual Aids
- 1.7. Visual Aids when Filming. Light
  - 1.7.1. Axle Lights
  - 1.7.2. Edge Lights
  - 1.7.3. Other Visual Aids
- 1.8. Other Visual Aids Radio Aids
  - 1.8.1. ILS
  - 1.8.2. VOR DME
  - 1.8.3. Other Non-Visual Aids
- 1.9. Lighting
  - 1.9.1. Lighting Requirements
  - 1.9.2. Mega Towers
  - 1.9.3. Lighting Studies
- 1.10. Waiting Points
  - 1.10.1. Track Entry Waiting Points
  - 1.10.2. Waiting Points
  - 1.10.3. Runway Protection Lights
  - 1.10.4. Stop Bars

## Module 2. Operations Manual

- 2.1. Structure and Maintenance of the Airport Manual
  - 2.1.1. Structure and Contents of the Manual
  - 2.1.2. Operational Uses Document
  - 2.1.3. Manual Updates Change Management
- 2.2. Access Control to the Movement Area
  - 2.2.1. Mandatory Controls Scope
  - 2.2.2. Random Checks
  - 2.2.3. Records
- 2.3. Inspections of the Movement Area
  - 2.3.1. Runway Inspections. Methodology. Frequency (F)
  - 2.3.2. Other Inspections
  - 2.3.3. Records
- 2.4. Work at the Airfield
  - 2.4.1. Instructions for the Execution of in Airports Works
  - 2.4.2. Work Permits
  - 2.4.3. Records
- 2.5. Platform Operation
  - 2.5.1. Platform Operation
  - 2.5.2. Platform Saturation
  - 2.5.3. Platform Management Software Restrictions and Incompatibilities
  - 2.5.4. Other Situations
  - 2.5.2. Records
- 2.6. Wildlife Hazard Management
  - 2.6.1. The Wildlife Coordinator
  - 2.6.2. Bird Repellents
  - 2.6.3. Wildlife Control Programs
  - 2.6.4. Obligations
  - 2.6.5. Records

- 2.7. Control of Airport Protection Areas and Surfaces
  - 2.7.1. Surveillance Inside the Airport
  - 2.7.2. Frangibility
  - 2.7.3. Surveillance Inside the Airport
  - 2.7.4. Records
- 2.8. Transfer of Disabled Aircraft
  - 2.8.1. Necessary Resources Agreements
  - 2.8.2. Records
- 2.9. Nexus Planes
  - 2.9.1. Air Side Infrastructure plans
  - 2.9.2. Operational Drawings
  - 2.9.3. Maintenance and Updating of Plans
- 2.10. Other Operational Procedures
  - 2.10.1. Maintenance Plans
  - 2.10.2. Operations in Non-Standard Weather Conditions
  - 2.10.3. Higher Key Aircraft Operations Affections to Pavements

## Module 3. Airport Operations

- 3.1. Track Operation Categories
  - 3.1.1. Visual Operations
  - 3.1.2. NP Instruments
  - 3.1.3. Precision Instrumentation
  - 3.1.4. Minimum Requirements for Each Category
- 3.2. Helicopter Operations
  - 3.2.1. Aerial Filming
  - 3.2.2. Interference
  - 3.2.3. Helicopter Performances

- 3.3. Special Operations
  - 3.3.1. Drones
  - 3.3.2. Helicopters
  - 3.3.3. Flights with Exemption Letter
  - 3.3.4. Hospital Flights
- 3.4. Platform Safety Regulations
  - 3.4.1. NSP Contents
  - 3.4.2. The PCP and the PCP R
  - 3.4.3. ERA; EPA
  - 3.4.4. Inspections and Penalties
- 3.5. The SSEI
  - 3.5.1. Fire Department
  - 3.5.2. Categories by Operations
  - 3.5.3. SSEI Service Degradation
  - 3.5.4. Simulations Response Times
- 3.6. The Self-Protection Plan
  - 3.6.1. Structure and Scope of the Plan
  - 3.6.2. Involved Parties and Obligations
  - 3.6.3. Coordination with Higher Level Plans
  - 3.6.4. Simulation Program
  - 3.6.5. Crisis Management
- 3.7. Airport Services to Airlines
  - 3.7.1. Refills
  - 3.7.2. Thaws
  - 3.7.3. Procurement
- 3.8. The Handling
  - 3.8.1. Scope of Handling
  - 3.8.2. Handling Agent Classification
  - 3.8.3. Service Contract Handling
- 3.9. Safety Programs
  - 3.9.1. FOD Prevention Program
  - 3.9.2. Track Safety Program
  - 3.9.3. Platform Safety Programming



- 3.10. Television Control
  - 3.10.1. Obstacle Identification and Assessment Documents
  - 3.10.2. Obstacles Inside the Airport
  - 3.10.3. Obstacles Outside the Airport

## Module 4. Multi-Management

- 4.1. The Airport Regulatory Framework AESA
  - 4.1.1. Legal Framework
  - 4.1.2. AESA and EASA Lines of Action
  - 4.1.3. AESA Inspection Activity
- 4.2. DORA
  - 4.2.1. Investment Obligations
  - 4.2.2. Planned Airport Capacity
  - 4.2.3. Pricing
  - 4.2.4. Ministerial Follow-Up
- 4.3. SGSO
  - 4.3.1. Structure of SGSO
  - 4.3.2. Risk Management
  - 4.3.3. Annual Operational Safety Program
- 4.4. Security/Safety
  - 4.4.1. Security Responsible Parties. FFCCSSEE
  - 4.4.2. Airport Security Management
  - 4.4.3. Safety Versus Convenience
- 4.5. Environmental Management Systems
  - 4.5.1. The Environmental Management System
  - 4.5.2. Noise Actions
  - 4.5.3. Actions on Light Pollution
  - 4.5.4. Other Lines of Action
- 4.6. Quality
  - 4.6.1. The Quality Management System
  - 4.6.2. The Quality of Aeronautical Data
  - 4.6.3. Quality Required from Suppliers
  - 4.6.4. Internal Audits and Other Actions

- 4.7. The EGC and CEOPS
  - 4.7.1. CEOPS Aeronautical Management
  - 4.7.2. CGA Airport Management
  - 4.7.3. Coordination with Air Navigation
- 4.8. Networks Management and HR Management
  - 4.8.1. Network Concept
  - 4.8.2. Alternative Airport
  - 4.8.3. HR Management H24; H12
  - 4.8.4. Agreements
- 4.9. Annual Budget
  - 4.9.1. Aeronautical Revenues
  - 4.9.2. Aeronautical Revenues
  - 4.9.3. Annual Budget Follow-Up and Compliance
  - 4.9.4. Restrictions and Financial Obligations
- 4.10. Change Management for Certificate Maintenance
  - 4.10.1. Information and Authorization from AESA
  - 4.10.2. Change Request File
  - 4.10.3. HR Training for Change



*A fully online and practice-based program to help you make the career change you want in the most convenient way”*

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.



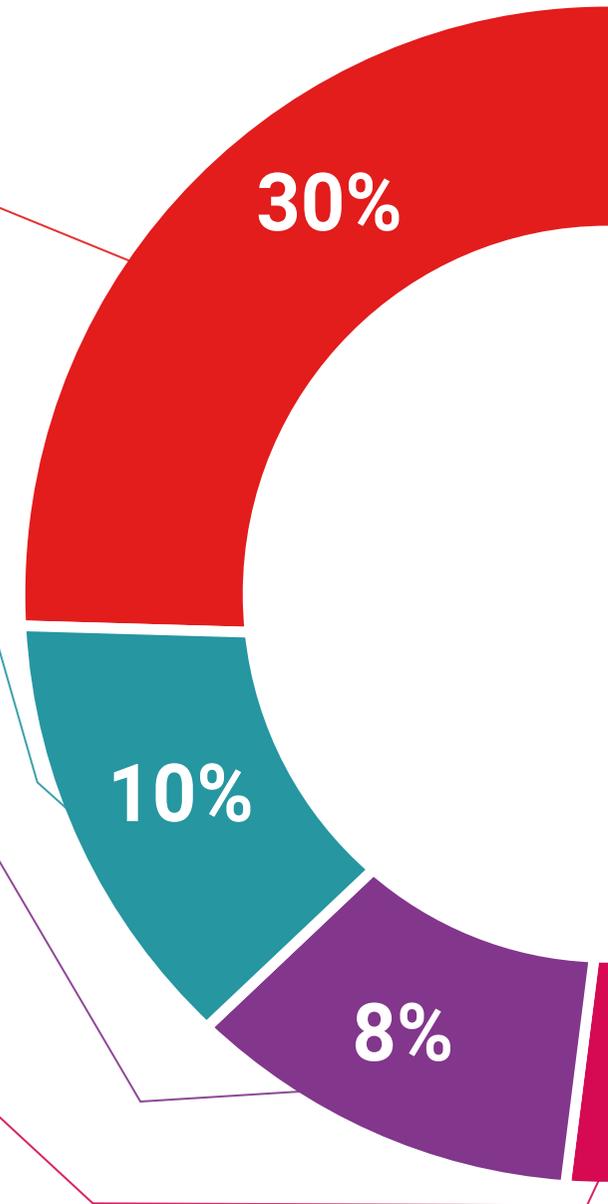
### Practising Skills and Abilities

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 Aeronautical Operations 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 Aeronautical Operations** 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 Aeronautical Operations**

Modality: **online**

Duration: **6 months**

Accreditation: **24 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 Aeronautical Operations

- » Modality: online
- » Duration: 12 months
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- » Schedule: at your own pace
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