

# Postgraduate Certificate

Dangerous Merchandise and  
Manned and Unmanned Aviation



ACT 979 463



1137300100012

Batch : B113711

**tech** technological  
university



## Postgraduate Certificate Dangerous Merchandise and Manned and Unmanned Aviation

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

Website: [www.techtitute.com/us/engineering/postgraduate-certificate/dangerous-merchandise-manned-unmanned-aviation](http://www.techtitute.com/us/engineering/postgraduate-certificate/dangerous-merchandise-manned-unmanned-aviation)

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# 01

# Introduction

Safety in aviation is one of its main maxims, especially when transporting dangerous goods. In this sense, the role of the engineer is key in the creation of projects in this field, as well as in the growing drone industry. Given its relevant role, TECH has created this 100% online course that will lead students to delve into the applicable regulations, into the storage and handling of this type of cargo, its application in various situations and limitations from the comfort of their home. All this, through a flexible pedagogy, which will allow the graduate to obtain a high quality education, compatible with personal and professional daily responsibilities in only 6 weeks.





“

*Enroll now in a Postgraduate Certificate that will allow you to be up-to-date in Dangerous Merchandise and Manned and Unmanned Aviation"*

Drone applications are becoming more and more widespread and reach situations that include the transport of dangerous goods. For this reason, from the field of Engineering, it is essential that professionals involved in this field have a mastery of the existing regulations and limitations to carry out operations with this type of unmanned aircraft.

Given its importance and the growth of this industry, TECH has developed this Postgraduate Certificate in Dangerous Merchandise and Manned and Unmanned Aviation of 6 weeks duration and with the best didactic content of the current academic panorama.

An academic course of 150 intensive teaching hours that will allow the engineer to obtain advanced learning about existing regulations, the situations of maximum complexity in the transport of goods, the required documentation and its use with Drones. All this, from a theoretical-practical approach and complemented by video summaries, videos in detail, specialized readings and case studies.

In addition, thanks to the Relearning method, based on the reiteration of essential content, the graduate will be able to integrate the key concepts much more effectively and without the need to invest long hours in memorization.

This is a unique opportunity for professionals to obtain a degree that will allow them to progress in their sector through a flexible academic option. And the fact is that, without classroom attendance or classes with restricted schedules, the student will have the opportunity to access the syllabus whenever and wherever they wish, from a computer, tablet or cell phone with an internet connection.

The **Postgraduate Certificate in Dangerous Merchandise and Manned and Unmanned Aviation** 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, provides 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



*The Relearning method will allow you to reduce study hours and obtain effective learning in less time"*

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*This program provides you with a detailed study of the ways of transporting dangerous goods”*

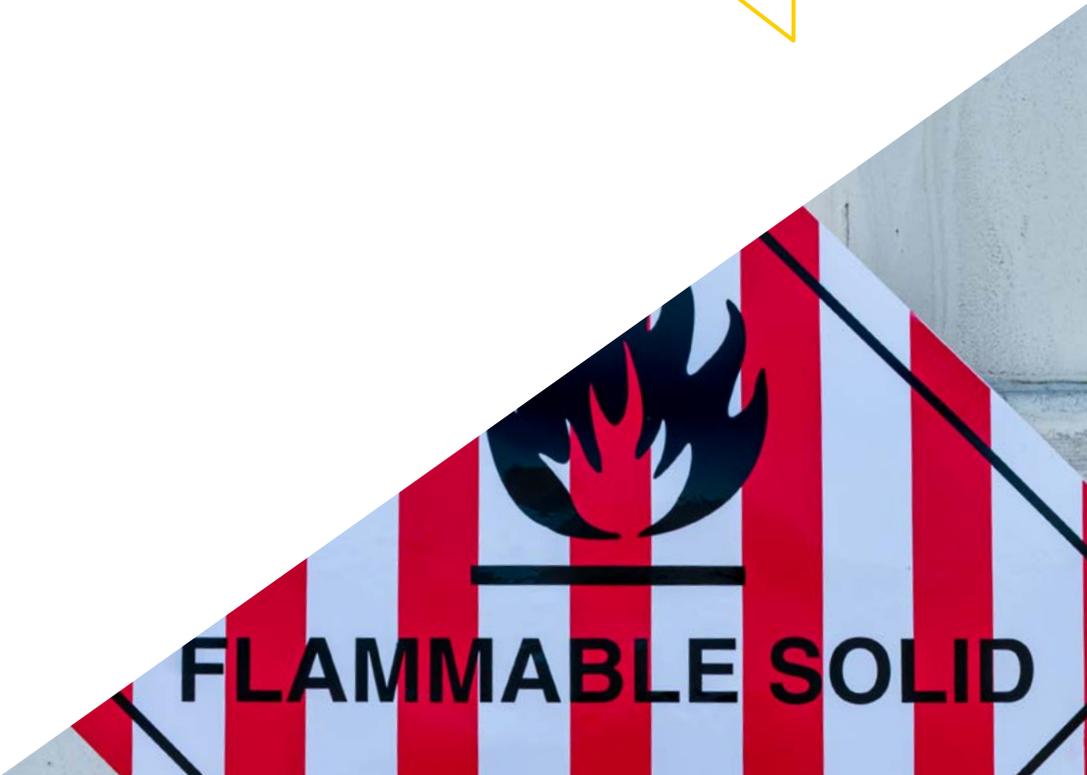
The program’s teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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.

*Get an apprenticeship that will lead you to grow professionally within the drone industry.*

*You have an academic path that will guide you through the current regulations regarding the limitations and documentation required to carry dangerous goods.*

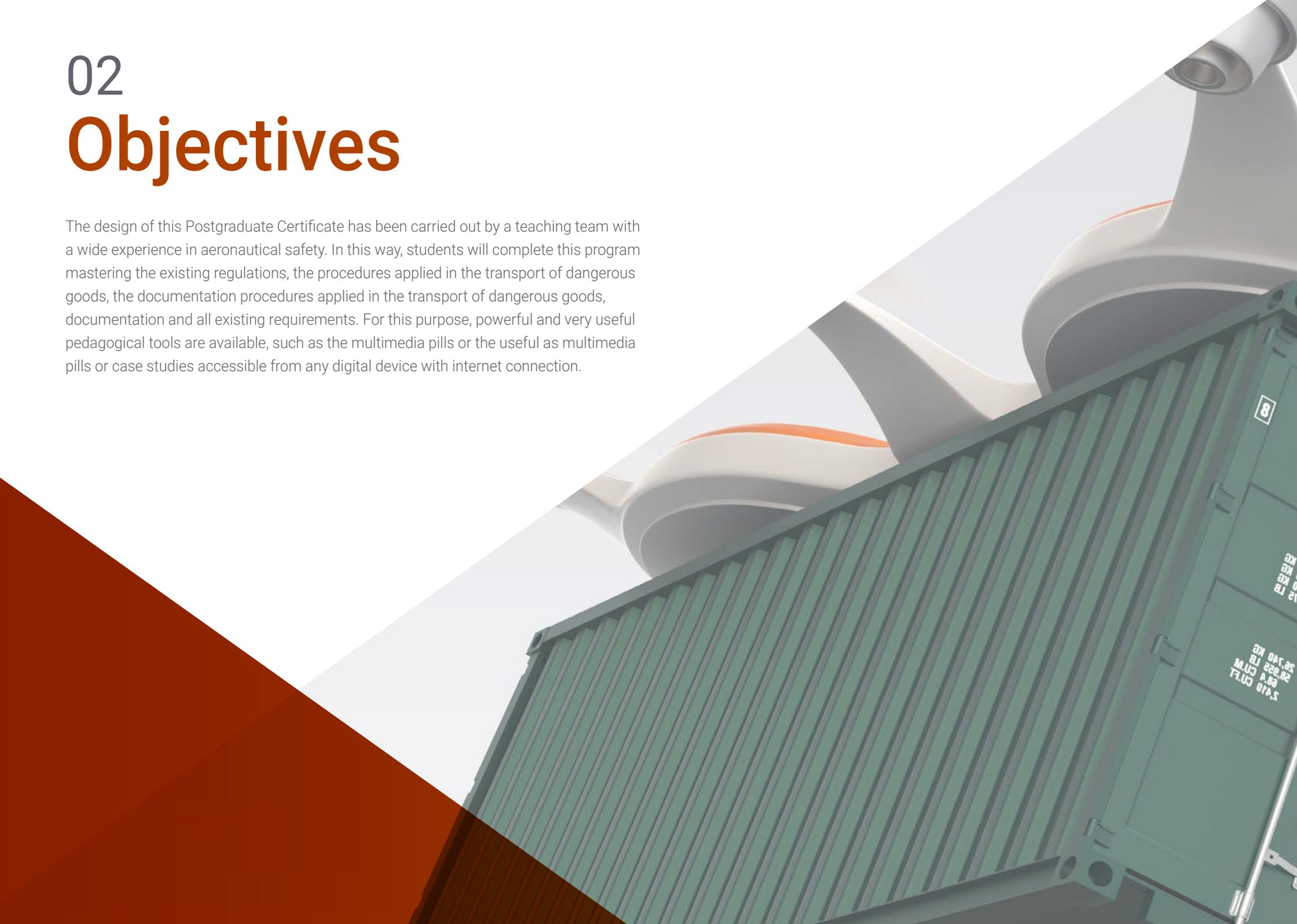


**FLAMMABLE SOLID**

# 02

# Objectives

The design of this Postgraduate Certificate has been carried out by a teaching team with a wide experience in aeronautical safety. In this way, students will complete this program mastering the existing regulations, the procedures applied in the transport of dangerous goods, the documentation procedures applied in the transport of dangerous goods, documentation and all existing requirements. For this purpose, powerful and very useful pedagogical tools are available, such as the multimedia pills or the useful as multimedia pills or case studies accessible from any digital device with internet connection.





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*Access whenever and wherever you want  
to the most advanced and up-to-date  
dangerous merchandise and aviation topics”*



## General Objectives

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- ♦ Carry out safe professional 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

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- ◆ 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

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*Integrate into your next drone projects the most advanced technological procedures to ensure safety in the transport of goods”*

03

# Course Management

In this university program, TECH has brought together an excellent teaching team that is distinguished by its extensive experience in the world of manned and unmanned aviation, as well as in the field of safety in this area. In this way, the graduate has the guarantee of access to an intensive program that will provide vital learning for their professional progression in this sector. In addition, thanks to their proximity, students will be able to resolve any doubts that may arise regarding the content of this program.





“

*You have a syllabus prepared by the best experts in Drone Piloting and Aeronautical Safety. Learn from great specialists thanks to TECH"*

## 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



## Professors

### Dr. Fernández Moure, Rafael

- ◆ Drone Pilot and Airport Security Expert
- ◆ Head of Administration at Swissport
- ◆ Deputy Ramp Manager and Training Manager at Eurohandling SL and Air España Líneas Aéreas
- ◆ Drone Pilot at Eventdron
- ◆ Check-in Supervisor at Air España
- ◆ Advanced Aircraft Pilot Course by European Flyers
- ◆ Practical RPAS Pilot Course (Multicopter 5 KG) by European Flyers
- ◆ Radio Operator Course for Remote Pilots by European Flyers

# 04

## Structure and Content

The academic itinerary of this university course will lead students to obtain a first level learning about the existing regulations governing dangerous goods and aviation. It will also delve into the requirements for both manned and unmanned aviation. All this, from a theoretical-practical perspective and complemented by numerous didactic material, accessible 24 hours a day, 7 days a week.



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*Specialized readings will allow you to further extend the information provided in this 6-week course"*

## Module 1. Dangerous Goods and Aviation

- 1.1. Application
  - 1.1.1. General Philosophy
    - 1.1.1.1. Definition
    - 1.1.1.2. Historical Review
    - 1.1.1.3. General Philosophy
    - 1.1.1.4. Air Security in the Transport of Dangerous Goods
    - 1.1.1.5. Training
  - 1.1.2. Regulation
    - 1.1.2.1. Basis of Regulation
    - 1.1.2.2. Aim of Regulation on Dangerous Goods
    - 1.1.2.3. Structure of DGR
    - 1.1.2.4. Application of the Regulation
    - 1.1.2.5. Relationship With ICAO
    - 1.1.2.6. Applicable Regulations in the Air Transport of Dangerous Goods
    - 1.1.2.7. Spanish Regulations
    - 1.1.2.8. IATA Regulations on Dangerous Goods
  - 1.1.3. Application for Unmanned Aviation: Drones
- 1.2. Limitations
  - 1.2.1. Limitations
    - 1.2.1.1. Prohibited Goods
    - 1.2.1.2. Goods Allowed Under Waiver
    - 1.2.1.3. Goods Allowed as Air Cargo
    - 1.2.1.4. Acceptable Goods
    - 1.2.1.5. Exempt Goods
    - 1.2.1.6. Plane Equipment
    - 1.2.1.7. On-Board Consumption Goods
    - 1.2.1.8. Goods in Excepted Quantities
    - 1.2.1.9. Goods in Limited Quantities
    - 1.2.1.10. Provisions for Dangerous Goods Carried by Passengers or Crew
  - 1.2.2. Variations Among States
  - 1.2.3. Variations Among Operators
- 1.3. Classification
  - 1.3.1. Classification
    - 1.3.1.1. Class 1. Explosives
    - 1.3.1.2. Class 2. Gases
    - 1.3.1.3. Class 3. Flammable liquids
    - 1.3.1.4. Class 4. Flammable solids
    - 1.3.1.5. Class 5. Oxidizing substances and organic peroxides
    - 1.3.1.6. Class 6. Toxic and Infectious Substances
    - 1.3.1.7. Class 7. Radioactive materials
    - 1.3.1.8. Class 8. Corrosives
    - 1.3.1.9. Class 9. Miscellaneous or Assorted Goods
  - 1.3.2. Exceptions: Permitted Goods
  - 1.3.3. Exceptions: Prohibited Goods
- 1.4. Identification
  - 1.4.1. Identification
  - 1.4.2. Dangerous Goods List
  - 1.4.3. Name of Item Shipped
  - 1.4.4. Generic Name (NPE)
  - 1.4.5. Mixtures and Solutions
  - 1.4.6. Special Provisions
  - 1.4.7. Quantity Limitations
- 1.5. Packaging
  - 1.5.1. Packaging Instructions
    - 1.5.1.1. Introduction
    - 1.5.1.2. General Conditions for All Classes Except Class 7
    - 1.5.1.3. Compatibility Requirements
  - 1.5.2. Packaging Groups
  - 1.5.3. Packaging Brands

- 1.6. Packaging Specifications
  - 1.6.1. Packaging Specifications
    - 1.6.1.1. Features
    - 1.6.1.2. Interior Packaging Features
  - 1.6.2. Packaging Tests
    - 1.6.2.1. Suitability Testing
    - 1.6.2.2. Preparation of Packaging for the Tests
    - 1.6.2.3. Area of Impact
    - 1.6.2.4. Stacking Test
  - 1.6.3. Test Reports
- 1.7. Branded and Labelled
  - 1.7.1. Branding
    - 1.7.1.1. Specifications and Requirements of Branding
    - 1.7.1.2. Packaging Brands Specification
  - 1.7.2. Labelling
    - 1.7.2.1. The Need to Put Labels
    - 1.7.2.2. Attaching the Labels
    - 1.7.2.3. Labelling on Packaging
    - 1.7.2.4. Labelling of Class or Division
  - 1.7.3. Labelling Specifications
- 1.8. Documentation
  - 1.8.1. Shipper's Declaration
    - 1.8.1.1. Cargo Acceptance Procedure
    - 1.8.1.2. Acceptance of Dangerous Goods by the Operator
    - 1.8.1.3. Verification and Acceptance
    - 1.8.1.4. Acceptance of Containers and Cargo Units
    - 1.8.1.5. Shipper's Declaration
    - 1.8.1.6. Air Waybill
    - 1.8.1.7. Conservation of Documents
  - 1.8.2. NOTOC
    - 1.8.2.1. NOTOC
  - 1.8.3. Event, Accidents and Incidents Report
- 1.9. Management
  - 1.9.1. Management
    - 1.9.1.1. Storage
    - 1.9.1.2. Incompatibilities
  - 1.9.2. Stowage
    - 1.9.2.1. Handling Packages Containing Liquid Dangerous Goods
    - 1.9.2.2. Loading and Securing of Dangerous Goods
    - 1.9.2.3. General Load Conditions
    - 1.9.2.4. Magnetized Material Load
    - 1.9.2.5. Dry Ice Load
    - 1.9.2.6. Stowage of Living Animals
  - 1.9.3. Handling Radioactive Goods
- 1.10. Radioactive Material
  - 1.10.1. Definition
  - 1.10.2. Legislation
  - 1.10.3. Classification
  - 1.10.4. Determination of the Level of Activity
  - 1.10.5. Determination of Other Features of the Material



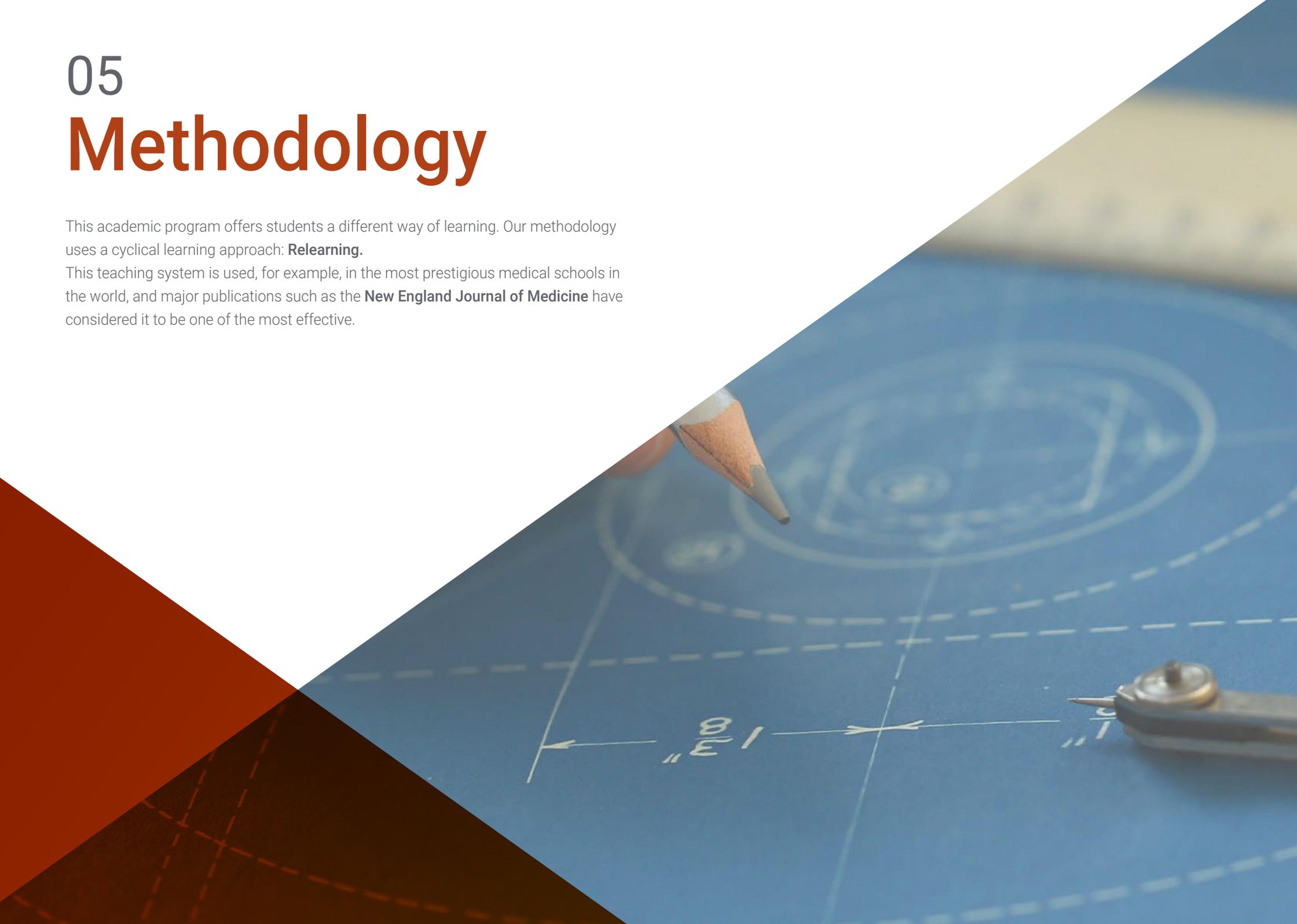
*A program that will keep you up to date on the methods of Radioactive Goods Handling"*

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.



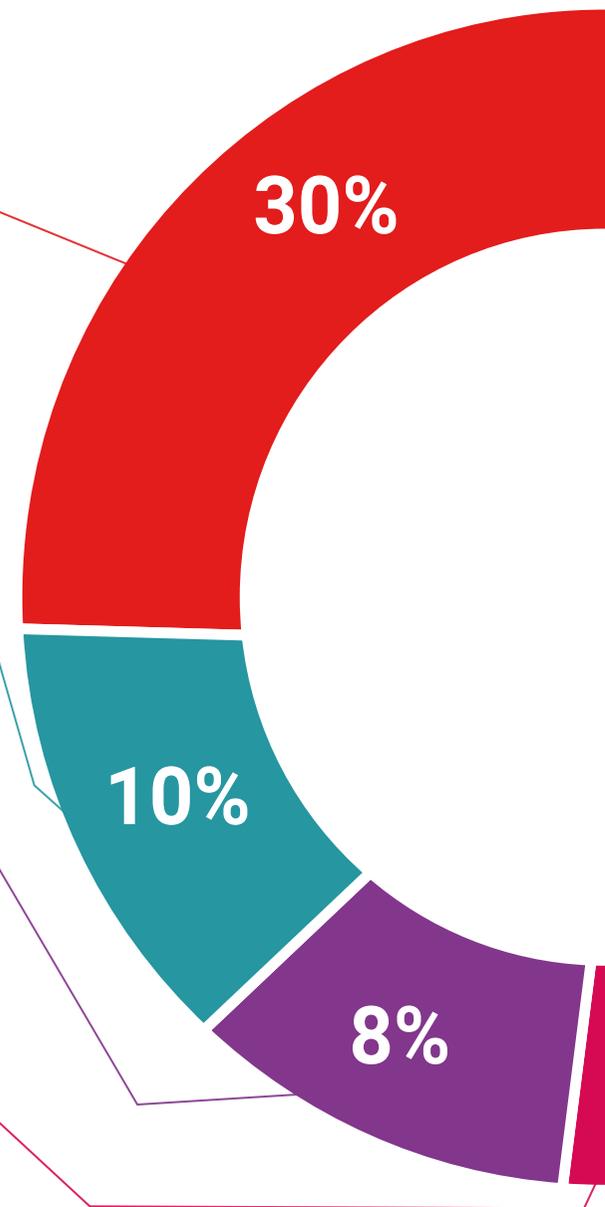
### Practising Skills and Abilities

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 Dangerous Merchandise and Manned and Unmanned Aviation guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Dangerous Merchandise and Manned and Unmanned Aviation** 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 Dangerous Merchandise and Manned and Unmanned Aviation**

Official N° 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

**tech** technological  
university

personalized service innovation

knowledge present Dangerous Merchandise and  
Manned and Unmanned Aviation

development

virtual classroom

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
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# Postgraduate Certificate

Dangerous Merchandise and  
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