

# Postgraduate Certificate

## Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors



## Postgraduate Certificate Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors

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

Website: [www.techitute.com/us/engineering/postgraduate-certificate/maritime-airport-industrial-renewable-energy-construction-works-other-sectors](http://www.techitute.com/us/engineering/postgraduate-certificate/maritime-airport-industrial-renewable-energy-construction-works-other-sectors)

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# 01

# Introduction

Civil engineering is a sector that develops in different areas in order to build constructions that, in one way or another, can improve people's quality of life. In this program TECH presents the most important aspects to take into account for the development of Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors. All this in a specialization of the highest level that will elevate you to the forefront of civil engineering. Don't think twice and give your career a boost by joining our alumni community.





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*Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors enable improved connectivity for people. Bet on this field of engineering and take a step forward in your profession"*

In this very complete Postgraduate Certificate, we show everything the civil engineer needs to know about Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors, among other sectors. In particular, a tour of a historical sector for civil engineering professionals, such as ports, will be made. The latest developments in port construction technology will be reviewed.

In addition, aspects of maritime climate in different seas and oceans to be taken into account for internationalization will be analyzed. Airport issues will also be covered, a very specific area that is not always included in the training of civil engineers, since international standards are used. In addition, we will study in depth the opportunities offered by the industrial sector and renewable energies, which will become a focus for investment in the coming years.

A highlight of this Postgraduate Certificate is the development of a little-known sector, but with great international projection, such as dredging. Thus, the vessels most commonly used in dredging tasks will be presented and an overview of the sector will be given. In the field of airports, knowledge of the signaling used and the technologies inherent to these infrastructures will be studied.

There will also be an opportunity to study renewable energies, a sector with great opportunities, given the investment that will be absorbed by this type of projects and because there are professional niches such as earthmoving, road construction and the execution of foundations in which civil engineers are specialists. As in other sectors, R&D&I is a sector that attracts talent and adds value to companies, so training in this area is very important in these times.

In short, TECH takes the student through theoretical and practical knowledge to a higher level of teaching, and shows him another way of studying and learning, more organic, simpler and more efficient. TECH will work to keep him motivated and to create in him a passion for learning. We will encourage you to think and develop critical thinking.

This Postgraduate Certificate is designed to give the student access to the specific knowledge of this discipline in an intensive and practical way. A great value for any professional.

It should be noted that since it is a 100% online course, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.



*Completion of this Postgraduate Certificate will place civil engineering professionals at the forefront of the latest developments in the industry"*

This **Postgraduate Certificate in Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- ◆ The development of case studies presented by experts in infrastructure and civil engineering
- ◆ 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 self-assessment can be used to improve learning
- ◆ Special emphasis on innovative methodologies in safety, health and PACMA
- ◆ 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 course is the best investment you can make in selecting an up-to-date program in the field of civil engineering. We offer you quality and free access to content"*

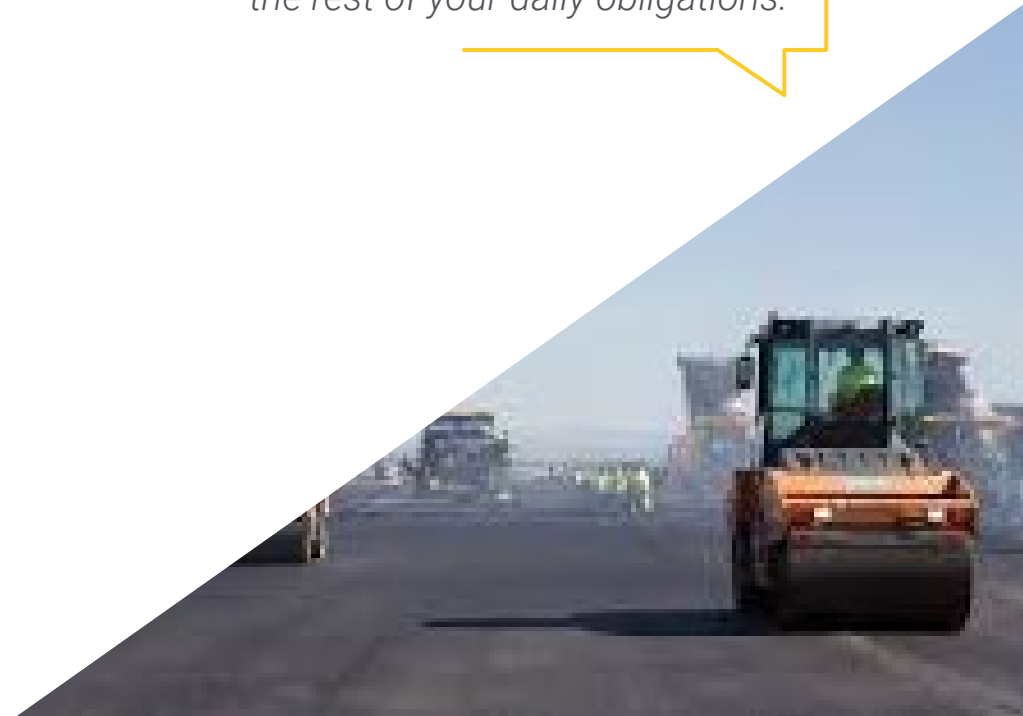
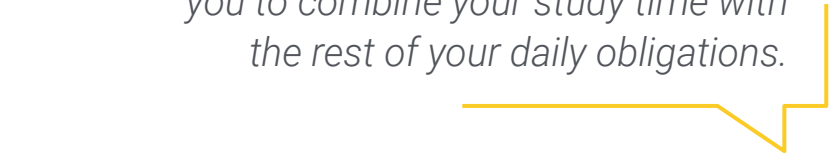
It includes, in its teaching staff, professionals belonging to the field of civil engineering, who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

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 an immersive training program designed to train 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. To this end, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors.

*This renewal has the best didactic material, which will allow you a contextual study that will facilitate your learning.*

*We offer you a 100% online Postgraduate Certificate that will allow you to combine your study time with the rest of your daily obligations.*



# 02 Objectives

The Postgraduate Certificate in Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors is oriented to facilitate the professional's performance in order to acquire and know the main novelties in this field, which will allow him to practice his profession with the highest quality and professionalism.





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*Our goal is to make you the best professional in your sector. And for this we have the best methodology and content”*



## General Objectives

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- ◆ Acquire new knowledge in Civil Engineering and Infrastructures
- ◆ Acquire new skills in terms of new technologies, latest machinery and software, knowledge of next steps and recycling
- ◆ Extrapolate this knowledge to other sectors of the industry, focusing on those fields that require more trained and qualified personnel year after year
- ◆ Processing the data generated in Civil Engineering activities, through the BIM environment, a mandatory reality for the drafting, construction, management and operation of infrastructures



*Improving your skills in the field of civil engineering will allow you to be more competitive. Continue your learning and give your career a boost"*





## Specific Objectives

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- ◆ Know the theory of maritime climate
- ◆ Execute works in ports
- ◆ Construction of Vertical Dikes
- ◆ Construction of Breakwater dikes
- ◆ Understand beach dynamics
- ◆ Know the equilibrium profiles on beaches
- ◆ Execution of works on the coast
- ◆ Training in the dredging industry
- ◆ Know the machinery and construction processes in the dredging sector
- ◆ Develop issues related to the particularities of the execution of works at airports, both from a technical and operational point of view
- ◆ Focus on the development of works in the industrial and renewable energy sectors
- ◆ Present the latest trends in the field of R&D&I
- ◆ Training in the industrialization sector of the civil works sector

# 03

# Course Management

TECH has professionals specialized in each area of knowledge, who pour into our specializations the experience of their work. People of recognized prestige in their area of expertise who have joined forces to offer the best training in the market.





“

*Our university employs the best professionals in all areas who share their knowledge to help you"*

## Management



### Mr. Uriarte Alonso, Mario

- Civil Engineer from the University of Cantabria
- Professional Master's Degree in Oceanographic Engineering
- 17 years of experience in the field of construction execution, having worked as construction manager in works of highways, airports, ports, canals, railways and hydroelectric works
- In the engineering field, he is the CEO of CANDOIS INGENIEROS CONSULTORES SL, a business dedicated to the drafting of projects and construction management



### Mr. Torres Torres, Julián

- Civil Engineer, University of Granada
- Professional Master's Degree in Structures
- 14 years of experience in the field of construction execution, having worked as construction manager in road, urbanization and WWTP works
- In the engineering field, he has developed his work as an independent freelance and as technical director at CANDOIS INGENIEROS CONSULTORES SL



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*Specialize in the world's leading private Spanish-speaking online university”*

# 04

# Structure and Content

The structure of the contents has been designed by the best professionals in the civil engineering sector, with extensive experience and recognized prestige in the profession, and aware of the benefits that the latest educational technology can bring to higher education.







“

*We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"*

**Module 1.** Maritime, Airport, Industrial and Renewable Energy  
Construction Works and Other Sectors

- 1.1. Port Works
  - 1.1.1. Current ROM Regulations
  - 1.1.2. Marine Climate
  - 1.1.3. Ports Executed with Sunken Caissons
  - 1.1.4. Breakwater Dikes
  - 1.1.5. Marinas
- 1.2. Coastal Works
  - 1.2.1. Coastal Dynamics
  - 1.2.2. Coastal Sediment Transport
  - 1.2.3. Beach Equilibrium Profile
  - 1.2.4. Exempt Dams on Coasts
- 1.3. Maritime Dredging and Earthmoving Works
  - 1.3.1. Need for Dredging Works in Coasts and Ports
  - 1.3.2. Machinery for the Execution of Dredging Works
  - 1.3.3. Execution of Dredging Works
- 1.4. Work on Airports Runways and Taxiways
  - 1.4.1. Regulations Applicable to Airport Works
  - 1.4.2. Operation of Airport Works
  - 1.4.3. Airport Signage
  - 1.4.4. Restrictions on Work at Airports
- 1.5. Works at Terminal Airports
  - 1.5.1. Execution Project Analysis
  - 1.5.2. BIM Analysis of the Project
  - 1.5.3. Airport Terminal Project Work Team
- 1.6. Works in the Industrial Sector
  - 1.6.1. Industry Sectors of Reference
  - 1.6.2. Civil works in the Industrial Sector
  - 1.6.3. Application of BIM Methodology in the Industrial Sector
  - 1.6.4. Working Methods in Industrial Projects





- 1.7. Works for Renewable Energy Projects Solar Farms
  - 1.7.1. Design and Calculation of the Drainage Network
  - 1.7.2. Design and Calculation of Roadways
  - 1.7.3. Design and Calculation of Foundations
  - 1.7.4. Preparation of Reports Applied to Energy Projects
- 1.8. Works for Renewable Energy Projects Wind Farms
  - 1.8.1. Design and Calculation of the Drainage Network
  - 1.8.2. Design and Calculation of Roadways
  - 1.8.3. Design and Calculation of Foundations
  - 1.8.4. Preparation of Reports Applied to Energy Projects
- 1.9. R&D&I Projects
  - 1.9.1. Areas of Study for R&D&I Projects
  - 1.9.2. Methodology of Work
  - 1.9.3. Advantages of Project Development in the R&D&I Field
  - 1.9.4. Added Value of R&D&I Projects for the Business
- 1.10. Industrialization of Civil Engineering
  - 1.10.1. Current Status of Civil Engineering Industrialization
  - 1.10.2. Sector Projection
  - 1.10.3. Technologies Applicable to Civil Engineering Industrialization
  - 1.10.4. Future and Prospects for the Industrialization of Civil Engineering

“ *A comprehensive and multidisciplinary program that will allow you to excel in your career, following the latest advances in the field of Civil Engineering*”

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.





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

## Case Study to contextualize all content

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

“

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



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



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

### A learning method that is different and innovative

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

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

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

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

## Relearning Methodology

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

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

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

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

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





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

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

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

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

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



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



### Study Material

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

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



### Classes

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

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



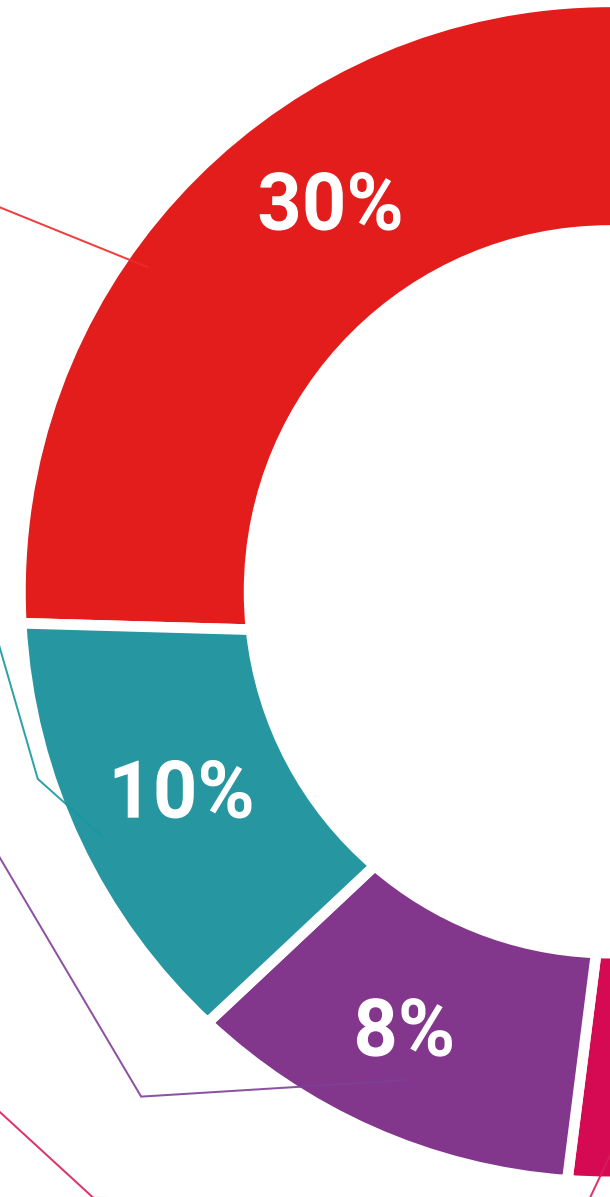
### Practising Skills and Abilities

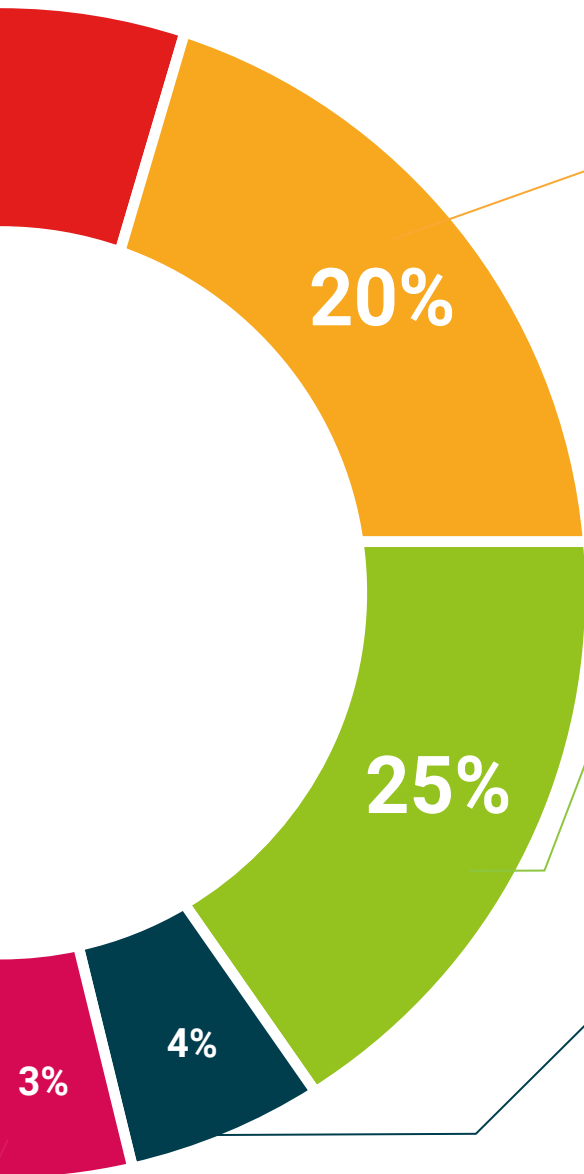
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

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





**Case Studies**

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



**Interactive Summaries**

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

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



**Testing & Retesting**

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



06

# Certificate

The Postgraduate Certificate in Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate from TECH Global University.





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*Successfully complete this training program and receive your university certificate without travel or laborious paperwork"*

This program will allow you to obtain your **Postgraduate Certificate in Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors** 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.

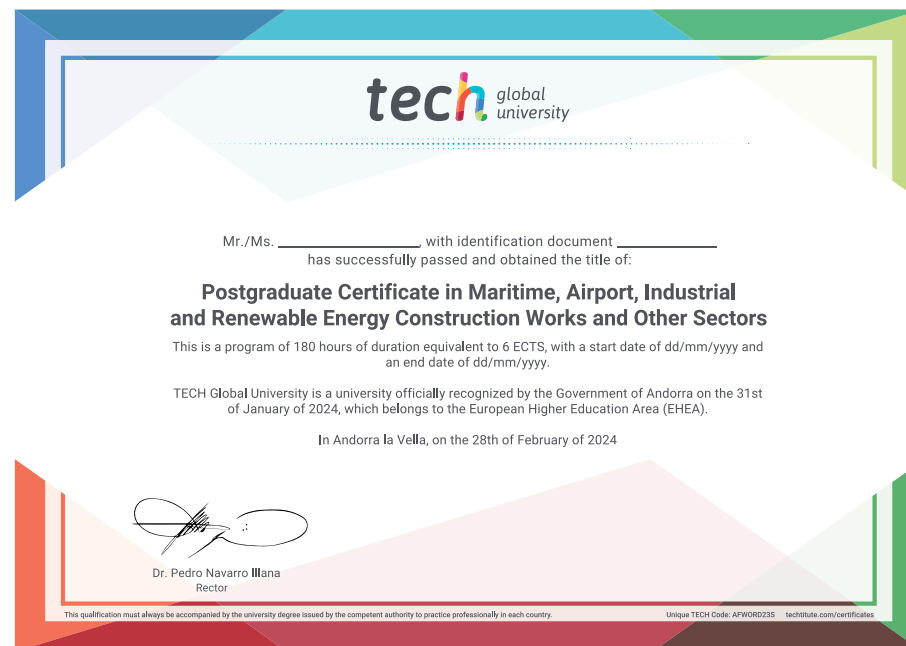
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Maritime, Airport, Industrial and Renewable Energy Construction Works and Other Sectors**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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  
development languages  
virtual classroom



**Postgraduate Certificate**  
Maritime, Airport, Industrial  
and Renewable Energy  
Construction Works  
and Other Sectors

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

# Postgraduate Certificate

Maritime, Airport, Industrial and  
Renewable Energy Construction  
Works and Other Sectors

