



# Postgraduate Certificate Wind Turbines

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/engineering/postgraduate-certificate/wind-turbines

# Index

 $\begin{array}{c|c} \textbf{Introduction} & \textbf{O2} \\ \hline \textbf{Introduction} & \textbf{Objectives} \\ \hline \textbf{03} & \textbf{04} & \textbf{05} \\ \hline \textbf{Course Management} & \textbf{Structure and Content} & \textbf{Methodology} \\ \hline \textbf{p. 12} & \textbf{p. 16} & \textbf{0.20} \\ \hline \end{array}$ 

06 Certificate

p. 28





## tech 06 | Introduction

Specialization in renewable energy infrastructures is of special relevance in this module, given the current socioeconomic situation and expected in the near future, in which it is intended to promote its implementation both internationally and in the European Union environment: the search for greater energy independence, as well as environmental sustainability in all aspects, and especially in energy, inevitably involves the generation of renewable energies in the maritime field.

The program also provides an overview of other offshore infrastructures in addition to those related to renewable energies. On the one hand, navigation channels, which are of special interest for maritime traffic as well as for international trade, are analyzed. On the other hand, infrastructure related to hydrocarbons and natural gas is also examined, as dependence on fossil fuel sources will continue to be evident in the coming decades.

The special singularities of marine dynamics make it necessary to also pay attention to how they affect these structures, not only to foresee possible adverse effects throughout their useful life, but also to be able to focus the design process, both at the structural and foundation level.

Finally, the aspect of construction projects will be addressed, with examples of projects, and the available regulations will be discussed.

This **Postgraduate Certificate in Wind Turbines** contains the most complete and up-to-date program on the market. Its most notable features are:

- The development of practical cases presented by Port Infrastructure experts
- The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional development
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies in Port Infrastructures
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Access to content from any fixed or portable device with an Internet connection



Wind turbines as part of the most up-to-date port organization, in a high-level Postgraduate Certificate"



A quality program that will allow you not only to follow the specialization, but also to have complementary support and information banks available"

Its teaching staff includes professionals from the field of civil engineering, who contribute their work experience to this training, as well as renowned specialists from reference 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 training programmed 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system developed by renowned and experienced experts in Port Infrastructures.

This program has the best educational resources that can be accessed online or downloaded, to make it easier for you to manage your studies and effort.

A highly comprehensive program, created with the objective of delivering the highest quality education, focused on raising our students to the highest level of proficiency.







# tech 10 | Objectives

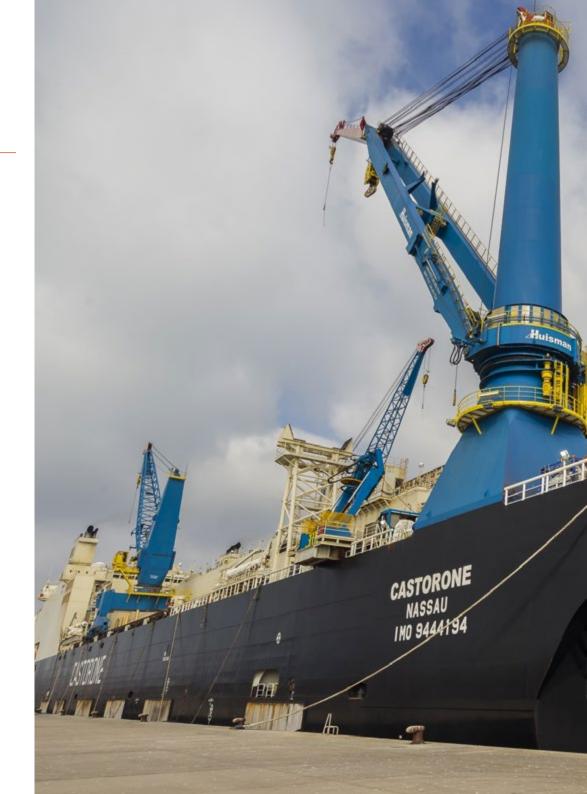


## **General Objective**

Create future professionals capable of addressing actions and solutions in the field of
port infrastructures, from a multidisciplinary perspective and based on the investigation
of the design of maritime works and the elements that influence it



A stimulating journey of professional growth designed to keep you interested and motivated throughout the entire program"

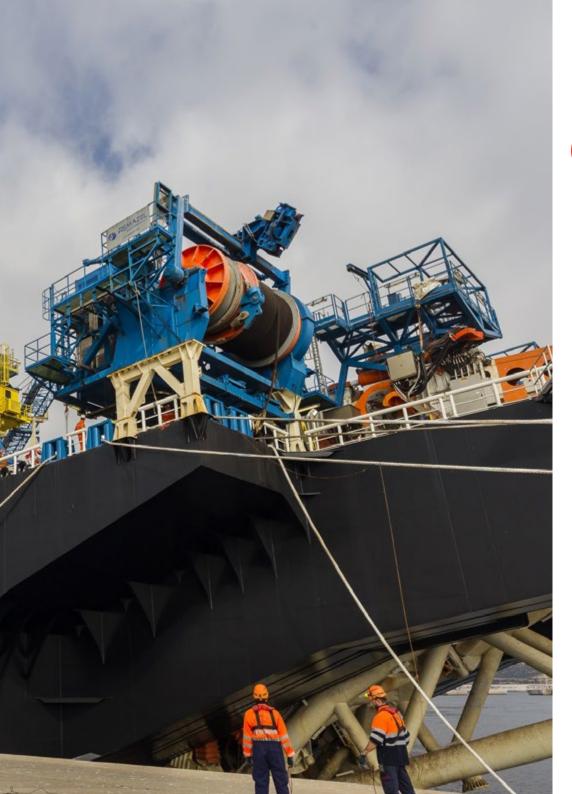






## **Specific Objectives**

- Delve into the technology and the different types of offshore structures
- Study the characteristics of offshore structures related to gas and hydrocarbons
- Delve into the characteristics of maritime structures related to the different renewable energies
- Expand knowledge with a more detailed understanding of the characteristics of offshore structures related to offshore wind energy
- Delve into the different types of foundations for offshore structures as well as design approaches
- In-depth study of the characteristics of the navigation channels
- Analyze the influence of maritime dynamics on offshore structures
- Visualize the different construction projects, and become familiar with the existing regulations

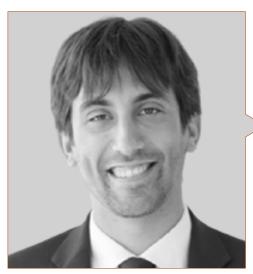






## tech 14 | Course Management

## Management



## Mr. Angulo Vedriel, Rafael

- Civil Engineer
- Master's Degree studies in Civil Engineering
- Ph.D. in Civil Engineering
- project manager and Design Manager both in Spain and on secondment in Latam, Middle East and Southeast Asia
- PMP © certification for project management

#### **Professors**

#### Mr. Montaner Montava, Jorge Alberto

- Civil Engineer from the Polytechnic University of Valencia
- Specialization in Transportation, Urban Planning and Land Use and Development
- Master's Degree in Renewable Energy Engineering from the University of Newcastle



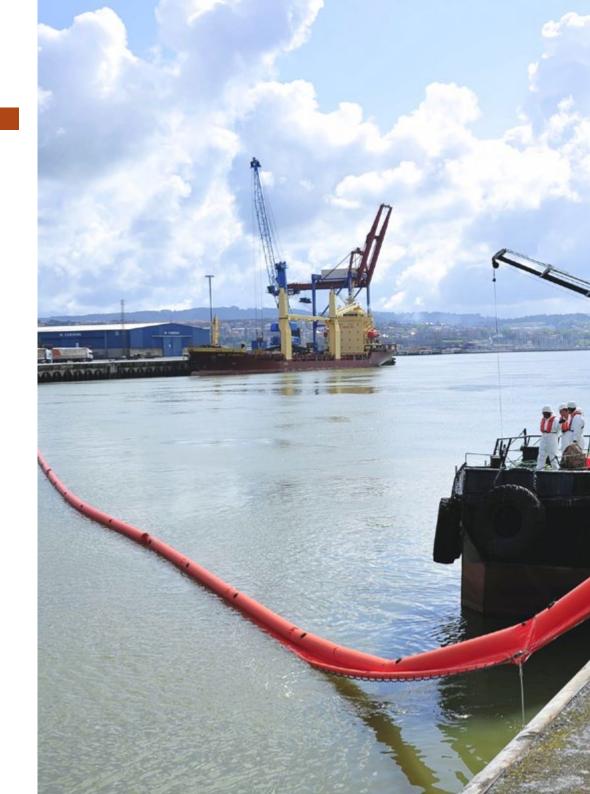


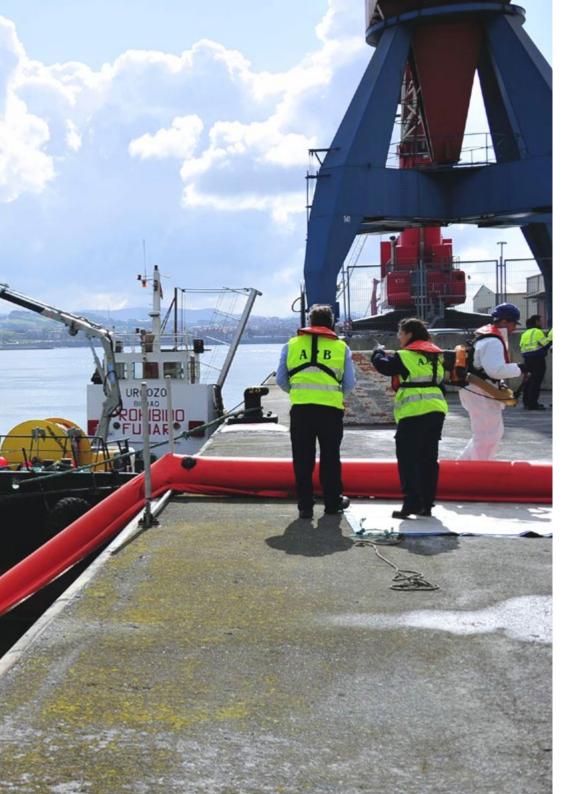


# tech 18 | Structure and Content

## **Module 1.** Offshore Structures and Renewable Energies

- 1.1. Introduction to Offshore Technology
- 1.2. Types of Offshore Structures
- 1.3. Hydrocarbons and Gas
- 1.4. Renewable Energies
- 1.5. Wind Turbines
- 1.6. Offshore Foundations
- 1.7. Navigation Channels
- 1.8. Influence of Maritime Dynamics
- 1.9. Construction Projects
- 1.10. Regulatory Introduction











# tech 22 | Methodology

### 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.

# tech 24 | Methodology

## 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.



## Methodology | 25 tech

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.



## Methodology | 27 tech





#### **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.





20%





## tech 30 | Certificate

This program will allow you to obtain your **Postgraduate Certificate in Wind Turbines** 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 Wind Turbines

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



Mr./Ms. \_\_\_\_\_ with identification document \_\_\_\_\_ has successfully passed and obtained the title of:

#### **Postgraduate Certificate in Wind Turbines**

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



<sup>\*</sup>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.



» Credits: 6 ECTS

» Exams: online

» Schedule: at your own pace

