Postgraduate Diploma

Maritime Transport and Ports

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Postgraduate Diploma
Maritime Transport and Ports

- Modality:**Online**
- Duration: **6 months.**
- Certificate: **TECH Global University**
- Credits: **18 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/postgraduate-diploma/postgraduate-diploma-maritime-transport-ports**

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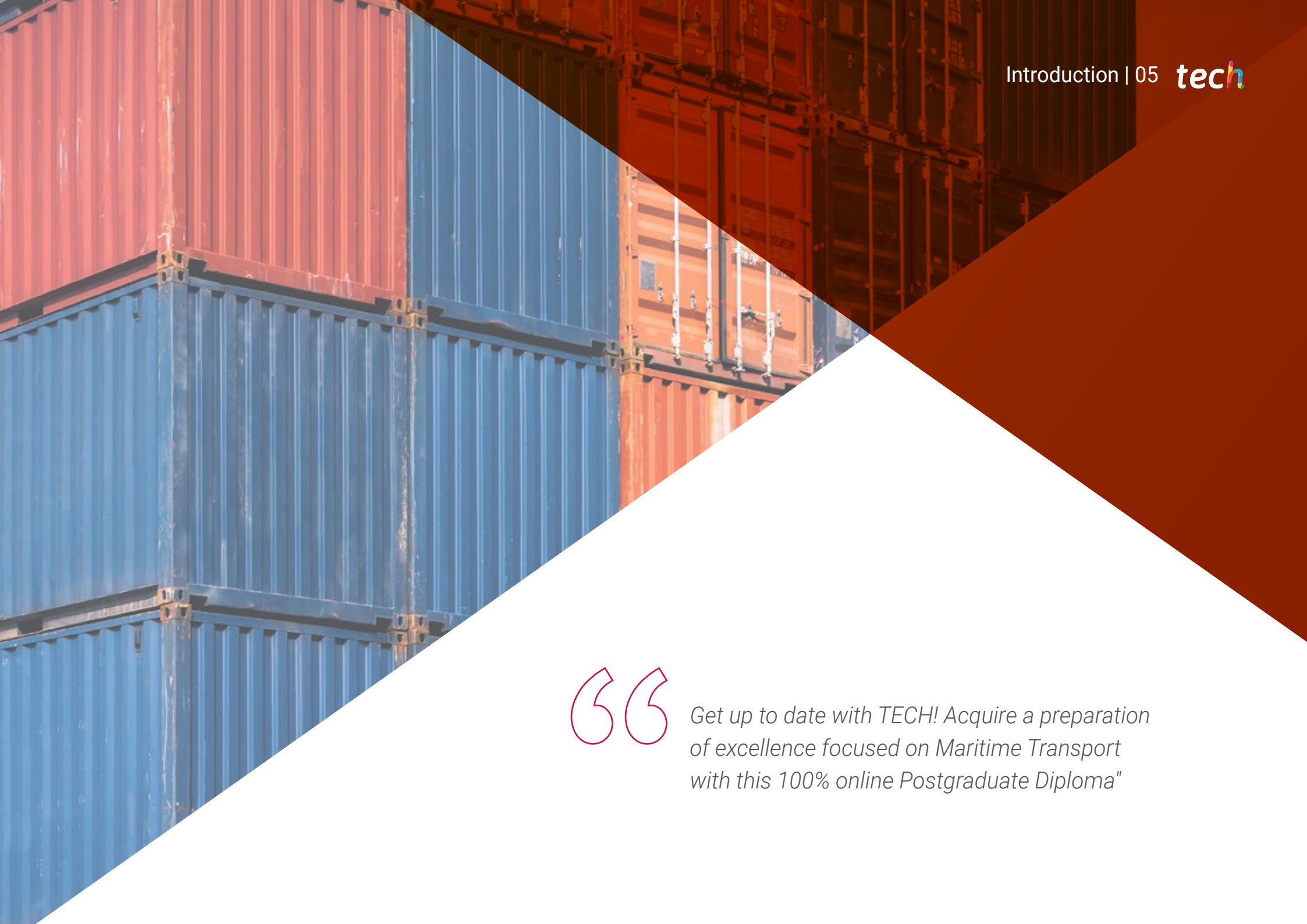
01

Introduction

The special relevance of ports as nodes generating economic activity and employment is indisputable, as well as their consequent impact on trade and the world economy. In fact, their evolution throughout history has been noted, coming to be considered as cyber-physical spaces, which respond to the highest demands of international trade and logistics. Because of this, it is vital for the sector to have prepared professionals. For this reason, TECH offers an intensive program on these advances in a 100% online format. A disruptive syllabus, without hermetic schedules or chronograms where graduates will be able to expand their competences in an essentially theoretical-practical way thanks to the innovative *Relearning* methodology.



Get up to date with TECH! Acquire a preparation of excellence focused on Maritime Transport with this 100% online Postgraduate Diploma"

International trade is the basis of Maritime Transport. Without trade, there would be no demand for mobility, just as, without the need for goods and services, there would be no production. Moreover, according to the IMO, about 90% of the world's economic resources are moved by ships.

In view of this situation, this Postgraduate Diploma will focus on the particularities that characterize port infrastructures, on their evolution to adapt to the changing trends in the flow of goods, the different types of traffic, etc. On the other hand, it will analyze the latest technologies that incorporate the most advanced shipping systems, as a strategy to cope with the increasing demands of a globalized and highly competitive market.

In addition, they will delve into port governance, in which they have also observed a significant development, from a maximum interventionism of public authorities, to an absolute protagonism of private agents.

Finally, they will devote part of the agenda to the implication of climate change and ocean pollution in this ongoing transformation of the maritime sector. In fact, traditional planning instruments themselves are being modified, both in their conception and in their processing. Professionals will therefore be brought up to date on carbon sequestration, coastal protection, biodiversity conservation and waste management.

In summary, this program will provide students with a solid theoretical foundation and the ability to apply it in real situations, all thanks to the guidance and support of a teaching staff made up of experts with extensive professional experience. In this way, TECH makes available to graduates the innovative formula of *Relearning*, a revolutionary learning methodology that is based on the repetition of fundamental concepts, ensuring in this way an effective integration of knowledge.

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

- The development of practical cases presented by experts in Maritime transportation and Ports
- The graphic, schematic, and practical contents which provide Therapeutics 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

Get up to date with the latest developments in the use of Artificial Intelligence in ports in little more than 6 months"

Delve into the solutions provided by the oceans themselves, the most recommended resources for greater sustainability in port plans"

Analyze the different port management models, with special emphasis on the Tool Port and the Landlord.

Boost your career in an agile and easy way! Delve into the characteristics of Maritime Transport and its importance for the economy.

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 program will enable students to acquire the knowledge and skills necessary to retrain their professional profile, focusing on the key aspects of the operation of Maritime Transport and Ports. The elements of the syllabus, carefully elaborated, will guide the graduates during their journey through the Postgraduate Diploma, providing them with the fundamental skills to achieve the established objectives and ensuring the best results. In this way, the engineer will develop a complete mastery of a field that is constantly evolving.

An unique opportunity to recycle your skills and keep up to date on the advances in the field of Maritime Transport and Ports"

General Objectives

- Substantiate the importance of maritime transport in globalization
- Examine the main maritime traffics and transport vessels
- Delve into the main maritime traffics
- Specify the international legislation in maritime transport
- Analyze traditional characteristics and functions of ports and their historical evolution
- Analyze the evolution of the logistics function in ports
- Examine the alternative of port infrastructure specialization as a way of adapting to the demands of logistics chains
- Analyze the latest trends in innovation and their incorporation in management and operation as highly transforming and differentiating elements
- Define the different Governance Models of Ports
- Examine the evolution of port governance in relation to the level of development of the countries
- Provide a context for the governance structure of a typical port
- Examine the guidelines contained in international climate directives and their impact on port infrastructure planning and construction
- Justify the different methods of financing sustainable infrastructures
- Analyze the Blue Economy and its development possibilities
- Examine the elements underpinning maritime climate analysis and its projection

Specific Objectives

Module 1. Maritime transportation

- Determine the cost of maritime transport
- Specify the different contracts for the operation of the vessel
- Analyze the freight market
- Examine emissions and their regulation

Module 2. Ports and port terminals

- Characterize the last generation ports
- Identify the various factors that can lead to port specialization and present the most characteristic typologies of ports and terminals
- Analyze the most widespread mechanical means for handling goods
- Present the latest technologies being incorporated by the most advanced ports today.

Module 3. Port Governance Model

- Characterizing the types of port governance
- Analyze the public-private relationship between the actors involved in the port space according to the type of governance
- Define a typical structure in the *land-lord* model

Module 4. Infrastructure Planning and Development and Environmental Sustainability

- Planning port areas in accordance with global climate reality
- Concretize the introduction of renewable energy projects in ports
- Environmental assessment of investment projects
- Calculate the profitability of port infrastructure projects

03

Course Management

TECH has brought together leading experts in Maritime Transport and Ports in order to provide its students with the most solid knowledge in the field. For this reason, this Postgraduate Diploma has the support of a highly qualified team, which has extensive experience in the industry and will provide students with the most advanced tools to enhance their skills. In this way, the necessary guarantees are offered to specialize at an international level in a sector in constant evolution, an open door to success in your professional career.

Triumph in the hands of the most recognized specialists! The teaching staff of this Posgraduate Diploma will guide and advise you with excellence"

Management

Dr. López Rodríguez, Armando

- Head of Technical Advisory Area in the Office of the President of Ports of the State
- Head of Strategic Planning Area at Ports of the State
- Project Manager at Ports of the State
- Head of the Resources and Information and Communications Technology Area at Ports of the State
- Head of Development Ports of the State
- Head of Corporate Relations Area at Ports of the State
- Head of Strategic Planning Area at Ports of the State
- Head of the Strategic Planning Area at Ports of the State
- AENOR Associate Professor
- UBT Associate Professor Lab
- Telecommunications Engineer from Universidad Politécnica de Madrid
- Degree in History from the National University of Distance Education (UNED)
- PhD's Degree in History from the National University of Distance Education (UNED)
- Master's Degree in Advanced Methods and Techniques of Historical, Artistic and Geographic Research from the National University of Distance Education (UNED)
- Management Development Program (PDD) from the IESE of the University of Navarra

Professors

Mr. Muriente Núñez, Carlos

- Naval and Ocean Engineer, ALTEN SPAIN
- Degree in Naval Architecture, Polytechnic University of Madrid
- Master's Degree in Naval and Ocean Engineering, Polytechnic University of Madrid
- Master's Degree in Renewable Energies by TECH, Technological Institute
- Course on Future in Materials in Industry, Construction and Technology, Polytechnic University of Madrid

Dr. López Ansorena, César

- Expert in Port Management
- Port Facility Security Officer recognized by the competent authority in maritime security matters
- Director of Private Security recognized by the Ministry of the Interior
- PhD in Civil Engineering Systems (Territory and Environment program) Cum Laude from the Polytechnic University of Madrid
- Civil Engineer from the Polytechnic University of Madrid
- Professional Master in Intelligence Analysis

Ms. Ana María Garcia

- Chief Advisor to the President of ESPO
- Head of Development Ports of the State
- Head of Development Area of HR at Ports of the State
- Business Development Manager for Transport and Industry at Indra
- Head of the Technical Department of Sales and Marketing at Ports of the State
- Teacher of the Master in Port Management and Planning and Intermodality
- Graduate in Psychology, specializing in Work and Organizational Psychology, from the Universidad Pontificia de Comillas (ICAI-ICADE) and Universidad Complutense of Madrid
- Master's Degree in Business Administration, IESE, from the University of Navarra
- Leadership Program in Public Management, IESE, by the University of Navarra
- Member of: Member of the Port Governance Committee and member of the Board of Directors of the General State Administration in the Port Authorities of Motril, Vigo, Gijón, A Coruña, Alicante, Tenerife and Cartagena

04

Structure and Content

This program explores the operation and main activities of port infrastructures, from the point of view of the incorporation of Artificial Intelligence and the lowest possible environmental impact. These topics are explored fully online through a complete Virtual Campus, offering the necessary flexibility to adjust to the individual needs and schedules of each student. In addition, the innovative *Relearning* methodology, a pioneer in TECH, facilitates the immediate understanding of complex subjects through the repetition of fundamental concepts.

Benefit from a continuously up to date program on the latest techniques and the most current tools in the port sector"

Module 1. Maritime transportation

1.1. Maritime transportation and International Trade
- 1.1.1. Maritime transportation
- 1.1.2. International Trade
- 1.1.3. Maritime traffics
- 1.1.4. TRAMP traffic and regular liners

1.2. Types of Ships in Maritime Transportation
- 1.2.2. Types of Ships in Maritime Transportation according to their cargo
- 1.2.2. Evolution of the ships in maritime transport
- 1.2.3. Container
  - 1.2.3.1. Types of maritime containers

1.3. Maritime Transportation Market
- 1.3.1. Maritime Transportation Market
- 1.3.2. World fleet
- 1.3.3. World Maritime Transportation Requirement

1.4. Maritime Transportation Costs
- 1.4.1. Cost distribution
- 1.4.2. Fixed Costs
- 1.4.3. Variable Costs
- 1.4.4. Loading/unloading costs
- 1.4.5. Factors Influencing Costs

1.5. Maritime traffics
- 1.5.1. Petroleum traffic
- 1.5.2. Bulk solids traffic
- 1.5.3. General cargo

1.6. Maritime Law
- 1.6.1. Maritime privileges
- 1.6.2. Ship mortgage
- 1.6.3. International maritime transport regulations and conventions

1.7. Contracts for the Operation of the Ship
- 1.7.1. Economic operation of the ship
- 1.7.2. Bareboat Lease
- 1.7.3. Chartering
- 1.7.4. Passenger contract

1.8. Freight Market
- 1.8.1. Freight Market Evolution
- 1.8.2. Journalism
- 1.8.3. Supply/ Demand

1.9. Accident and Marine Insurance
- 1.9.1. Accidents in Navigation
- 1.9.2. Types of Breakdowns
- 1.9.3. Marine Insurance

1.10. Emissions International Regulation
- 1.10.1. Maritime transportation emissions
- 1.10.2. International Regulation
- 1.10.3. Form of Fulfillment of Regulations
- 1.10.4. Reduction of CO2 emissions

Module 2. Ports and port terminals

2.1. The Commercial Port. Functions
- 2.1.1. Functions of a commercial port
- 2.1.2. Ports and the Supply Chain
- 2.1.3. Ports in the 21st Century

2.2. Port Models according to the flow of goods
- 2.2.1. Ports as essential nodes in logistics chains.
- 2.2.2. Port typology according to the flow of goods
  - 2.2.2.1. *Import/export* Ports
  - 2.2.2.2. *Hub*Ports
- 2.2.3. Adaptation to changing trends in the flow of goods

2.3. Port Terminals
- 2.3.1. Port Specialization
- 2.3.2. Layout and Zones of a Port Terminal
- 2.3.3. Types of port terminals

2.4. Cranes and mechanical means
- 2.4.1. Cranes for loading and unloading the ship
- 2.4.2. Means for transporting cargo in a terminal.
- 2.4.3. Means for cargo handling in the yard

2.5. Multi-purpose terminals and container terminals
- 2.5.1. Multipurpose or general purpose terminals
- 2.5.2. Container terminals
- 2.5.3. Loading and unloading flow in a container terminal

2.6. Bulk Terminal
- 2.6.1. Bulk solids Terminal
- 2.6.2. Bulk Liquids Terminal
- 2.6.3. Special installations

2.7. Roll-on/roll-off terminals
- 2.7.1. Roll-on/roll-off terminals
- 2.7.2. Containers on wheeled platforms
- 2.7.3. Automotive

2.8. Passenger terminals and other types of specialized terminals
- 2.8.1. Passenger terminals
- 2.8.2. Sports marinas
- 2.8.3. Fishing terminals

2.9. Intelligent Ports and Automation
- 2.9.1. *Smart Ports*
- 2.9.2. Digitalization
- 2.9.3. Automation of operations

2.10. Latest trends in port innovation
- 2.10.1. Artificial Intelligence and its application to ports
- 2.10.2. Simulation Based Training (SBT)
- 2.10.3. Digital port twins

Module 3. Port Governance Model

3.1. Port Governance
- 3.1.1. Port Governance
- 3.1.2. Port Governance Evolution
- 3.1.3. Port Governance and economic development

3.2. Port Governance Models
- 3.2.1. Public and private ports
- 3.2.2. The *tool ports*
- 3.2.3. The *Landlord port* model

3.3. Port Governance Trends
- 3.3.1. Stabilization of the governance model: towards a nuanced *landlord*
- 3.3.2. Vertical and horizontal integration.
- 3.3.3. Competition control and supervision activities.

3.4. The *landlord* model and the public domain
- 3.4.1. The management of the port public domain
- 3.4.2. Revenue from fees
- 3.4.3. Revenue from tariffs

3.5. Examples of port governance models
- 3.5.1. Private ports in the United Kingdom
- 3.5.2. The *landlord* model in continental Europe
- 3.5.3. Hispanic America. Models in transition

3.6. Port Services regime
- 3.6.1. Nature of the service (public, private). Requirements for the provision of the service
- 3.6.2. Administrative link /contract, license.
- 3.6.3. Form or requirements for access to the provision of the service. Concurrence. Limit on the Number of providers

3.7. Coordination of port systems at the country level
- 3.7.1. Centralized Systems
- 3.7.2. Decentralized Systems
- 3.7.3. Mixed Systems

3.8. Intraport governance
- 3.8.1. The Management of a Port
- 3.8.2. Sample organization chart and functional areas
- 3.8.3. Port planning and operation areas

3.9. Port administration
- 3.9.1. Economic and financial management
- 3.9.2. Human resources management
- 3.9.3. Industrial safety and occupational risk prevention

3.10. Relations between the port and its environment
- 3.10.1. Port-City interrelationships
- 3.10.2. The urban-port network. Urban planning considerations
- 3.10.3. Institutional activities and collaboration with the environment

Module 4. Infrastructure Planning and Development and Environmental Sustainability

4.1. Sustainable Port Planning
- 4.1.1. Legislation: *Fit for* 55 and EU ETS
- 4.1.2. Relations with other continents
- 4.1.3. Relations with the International Maritime Organization (IMO)

4.2. Port planning instruments and adaptation to the new climatic reality
- 4.2.1. Master *Plans*
- 4.2.2. Planning instruments for infrastructure development
- 4.2.3. Design and redesign of port terminals: electrification plans
- 4.2.4. Sustainable port-city relations: Climate change and design of port-city spaces

4.3. Environmental assessment of port planning instruments
- 4.3.1. Infrastructure development programs
- 4.3.2. Evaluation of infrastructure development plans
- 4.3.3. Evaluation of infrastructure projects

4.4. Financing of projects for sustainable development of port infrastructures
- 4.4.1. The European Investment Bank
- 4.4.2. The World Bank
- 4.4.3. The Inter-American Development Bank
- 4.4.4. International Investment Backgrounds
- 4.4.5. Issuance of green bonds

4.5. Ports and coastal erosion: *Working with Nature*
- 4.5.1. Estuary preservation projects
- 4.5.2. Coastal regeneration projects
- 4.5.3. Sediment reuse projects

4.6. Projects for investment in renewable energy sources
- 4.6.1. *On shore* and *off shore* wind energy generation projects
- 4.6.2. *On shore* and *off shore* photovoltaic energy projects
- 4.6.3. Other renewable energies

4.7. Evaluation of the profitability of investment projects. MEIPORT Methodology
- 4.7.1. Analysis of the context and objectives of the project
- 4.7.2. Analysis of Alternatives
- 4.7.3. Definition of Project
- 4.7.4. Financial Analysis
- 4.7.5. Economic Analysis
- 4.7.6. Sensitivity and Risk Analysis

4.8. BIM technology applied to ports
- 4.8.1. Port terminal Design
- 4.8.2. Design of dock electrification projects
- 4.8.3. Design of port land access projects

4.9. Marine environment monitoring and forecasting tools
- 4.9.1. Measurement networks: buoys, tide gauges and high-frequency radars
- 4.9.2. Elements for maritime climate prediction and change scenarios
- 4.9.3. Projects

4.10. Blue Economy
- 4.10.1. Blue Economy Dimensions Dimensions
- 4.10.2. Marine ecosystem preservation projects
- 4.10.3. Ports and climate and marine research centers: towards a long-term relationship

Enroll now and expand your skills with TECH! From the comfort of your home and adapted to your schedule."

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

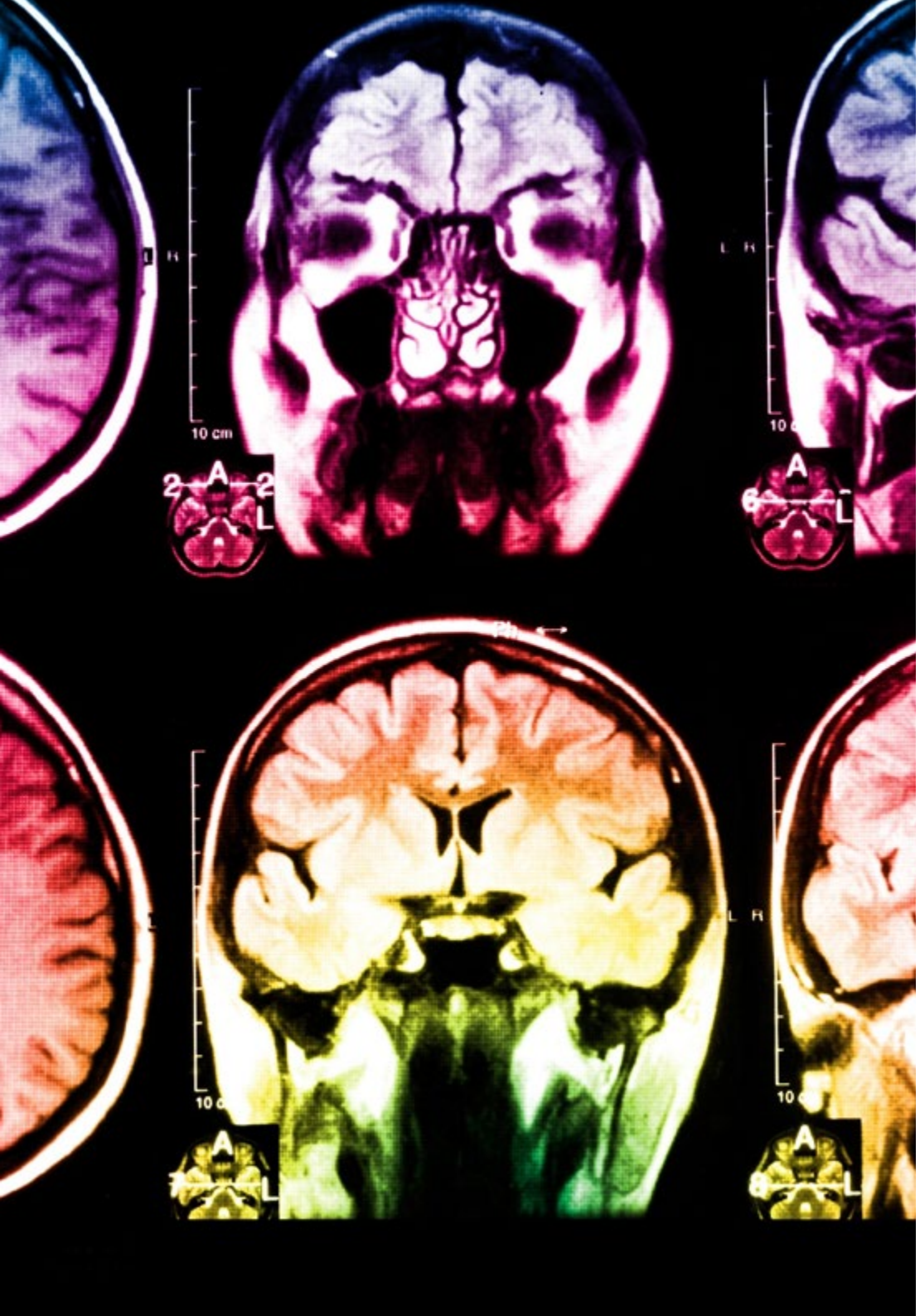
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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.

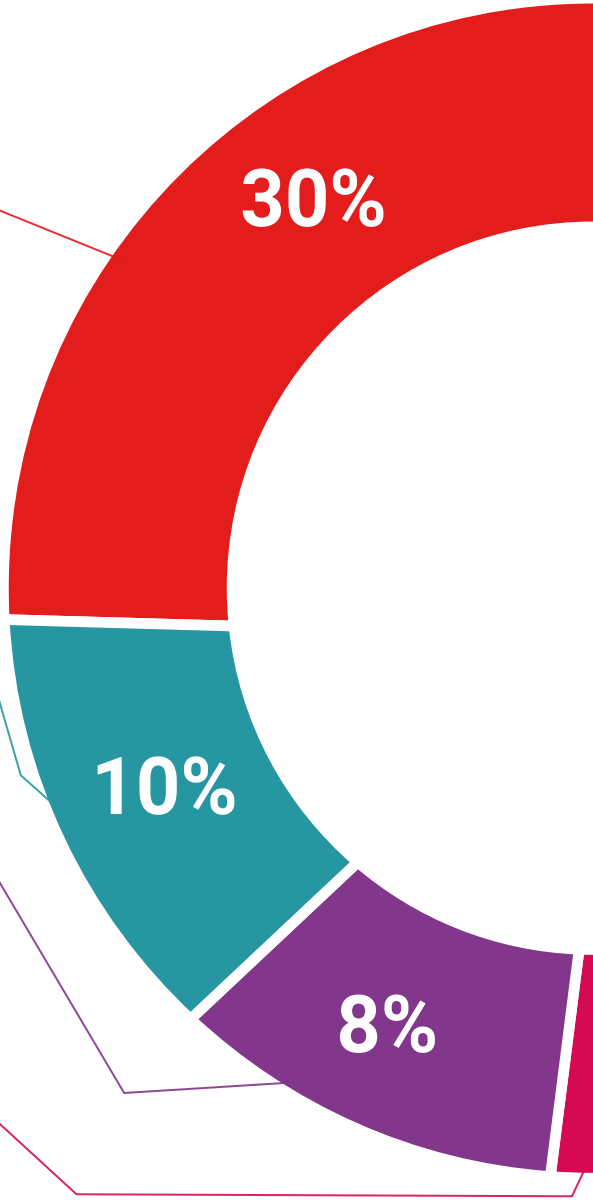
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

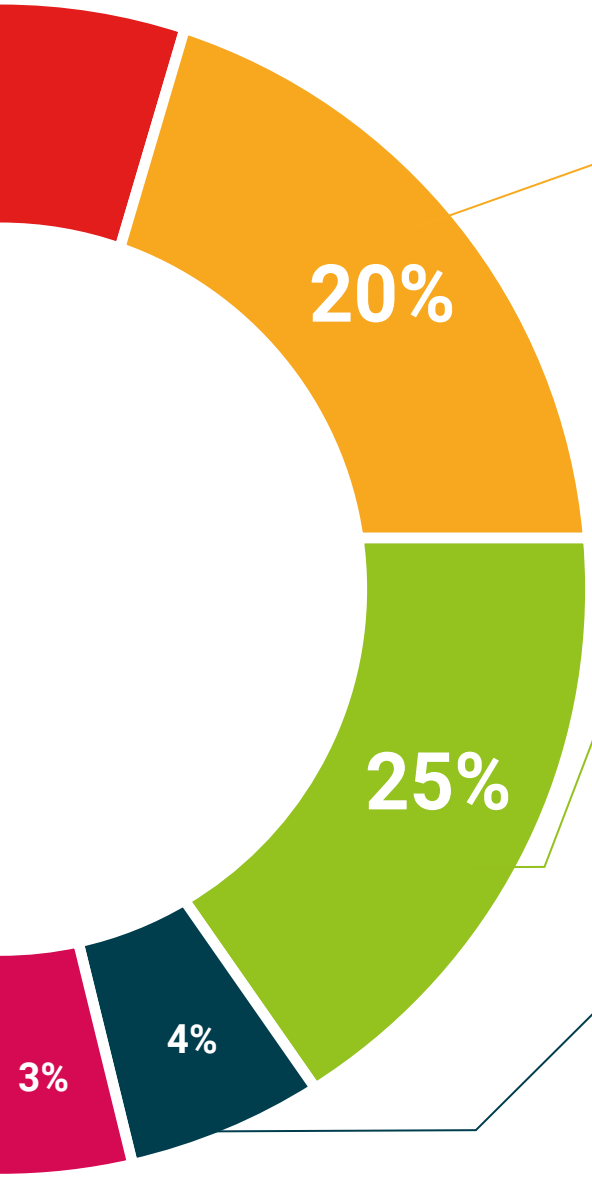
Practising Skills and Abilities

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 Maritime Transport and Ports 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 Maritime Transport and Ports** 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 Maritime Transport and Ports**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

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

Postgraduate Diploma in Maritime Transport and Ports

This is a program of 450 hours of duration equivalent to 18 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

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

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