



Postgraduate Diploma Port Infrastructure and Sustainability

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Target Group: University graduates and postgraduates who have previously completed any of the degrees in the field of Business Sciences, Civil or Naval Engineering.

Website: www.techtitute.com/pk/school-of-business/postgraduate-diploma/postgraduate-diploma-port-infrastructure-sustainability

Index

Why Study at TECH? Why Our Program? Objectives Welcome p. 4 p. 6 p. 10 p. 14 06 Methodology Structure and Content Our Students' Profiles p. 20 p. 28 p. 36 80 **Course Management** Impact on Your Career Benefits for Your Company p. 40 p. 44 p. 48 Certificate

01 **Welcome**

Interconnection has been vital for international trade, allowing the global economy to continue to grow at a rapid pace. In this way, the port terminals have been optimizing their facilities and endowments on track to environmental efficiency, allowing at a business level to improve the overall operability of the ports. Therefore, this program will offer the professionals a wide content of the highest standards, developing specialized skills to face the challenges available to the business world. In this sense, it will provide students with the most innovative theoretical and practical resources related to Port Infrastructure and Sustainability by delving into the IALA Maritime Beacon System. This through an online pedagogical modality, achieving an effective and unique academic experience.









tech 08 | Why Study at TECH?

At TECH Technological University



Innovation

The university offers an online learning model that balances the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95%

of TECH students successfully complete their studies



Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

+100000

+200

executives prepared each year

different nationalities



Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

+500

collaborative agreements with leading companies



Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



At TECH, you will have access to the most rigorous and up-to-date case analyses in academia"

Why Study at TECH? | 09 tech

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



Analysis

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



Academic Excellence

TECH offers students the best online learning methodology. The university combines the *Relearning* methodology (the most internationally recognized postgraduate learning methodology) with Harvard Business School case studies. A complex balance of traditional and state-of-the-art methods, within the most demanding academic framework.



Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.





tech 12 | Why Our Program?

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:



A Strong Boost to Your Career

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of students achieve positive career development in less than 2 years.



Develop a strategic and global vision of the company

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional fields.

Our global vision of companies will improve your strategic vision.



Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.



You will take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.



Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.



Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different fields in companies.

20% of our students develop their own business idea.



Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.



You will be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified teachers from the most prestigious universities in the world: the TECH Technological University community.

We give you the opportunity to study with a team of world-renowned teachers.





tech 16 | Objectives

TECH makes the goals of their students their own goals too Working together to achieve them

The Postgraduate Diploma in Port Infrastructure and Sustainability will enable students to:



Conceptualizing logistics and placing it in today's economic environment



Analyze the general composition of today's intermodal chains



Conceptually define the processes that compose it and give rise to the different types of logistics



03

Understand what each of these processes consists of and the purpose for which they were conceived



Update the student's knowledge in the field of multimodal transport



Substantiate the importance of maritime transport in globalization



Examine the main maritime traffics and transport vessels



09

Examine the main maritime traffics in more detail



Analyze what multimodality is and its role within the logistics chain



Specify the international legislation in maritime transport



Delve into the traditional characteristics and functions of ports and their historical evolution



Analyze the latest trends in innovation



Delve into the evolution of the logistics function in ports



13

Examine the alternative of specialization of port infrastructures as a way of adapting to the demands of logistics chains



Define the different models of port governance of ports



Examine the evolution of port governance in relation to the level of in connection with the degree of development of countries



Define a port model for the future in a context of profound and global transformation





Analyze with maximum objectivity these aspirations, from a technical point of view



Provide a context for the governance structure of a typical port



Identify the importance of consensus, communication and transparency in the process of formulating the strategy of a port system that has important repercussions on society as a whole, both economically and socially





tech 22 | Structure and Content

Syllabus

This Postgraduate Diploma aims to place students in the best professional positions according to the different obstacles that may arise in the development of their career in Port Infrastructure and Sustainability. In this way, this program provides multiple resources and technical tools, obtaining exclusive knowledge in port terminal management, evaluation of infrastructure development plans and coordination with public security agencies.

In order to achieve the established goals, the teaching staff has developed an interesting agenda that employs 3 modules, so that the professionals expands and enhances their vision of knowledge in electricity supply to ships, design of projects of electrification of docks and technological trends in port security.

The students will consolidate their knowledge on specific aspects of sustainable port-city relations, focused on concepts such as climate change and design of port-city spaces. In addition, it will delve into the identification of threats and vulnerabilities. This is a program that integrates a specialized teaching team, supported by a quality multimedia content that offers dynamism.

Also, TECH takes into account comfort and excellence, that is why this pogram offers a complete and quality learning, while providing flexibility to study.

Graduates only need a device with an Internet connection to easily access the virtual platform, 24 hours a day and from anywhere in the world.

This Postgraduate Diploma takes place over 6 months and is divided into 3 modules.

Module 1 Maritime-port Logistics and Port Services

Module 2 Planning and Development of Infrastructure and Environmental Sustainability

Module 3 Port Security and Security



Where, When and How is it Taught?

TECH offers the possibility to develop this Postgraduate Diploma in Port Infrastructure and Sustainability totally online. Throughout the 6 months of the educational program, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.

tech 24 | Structure and Content

1.9.3. Supply of LNG

1.9.4. Supply of electricity to ships

Module 1. Maritime-port Logistics and Port Services 1.1. Port Community 1.2. Port Operations 1.3. Port logistics 1.4. General management of the port 1.1.1. Port Community 1.2.1. Port operations and activities in port 1.3.1. Port logistics 1.4.1. General organization of sea and land traffic in 1.1.2. Key Actors of the Port Community 1.2.2. Information systems in the port operations 1.3.2. Ports as logistical nodes in the global 1.1.3. Applied Quality Management Systems to the 1.2.3. Information flows in the port operations supply chain 1.4.2. Entry of ships into port Port Community 1.3.3. Logistics in transport by container 1.4.3. Allocation of mooring and docking posts 1.4.4. Stays of ships and internal movements 1.4.5. Movement of vehicles and persons in port 1.4.6. Passengers and goods 1.5. Management of a port terminal 1.8. Goods, passengers and waste 1.6. Port Services 1.7. Technical and nautical services reception services 1.5.1. Levels of analysis 1.6.1. Regulation of port services 1.7.1. Mooring 1.5.2. Planning of port terminals 1.6.2. Public service obligations 1.7.2. Port trailer 1.8.1. Goods handling service 1.5.3. Productivity indicators 1.6.3. Types of port services 1.7.3. Pilotage 1.8.1.1. Loading and stowing activities 1.8.1.2. Activities in the field of waste disposal 1.8.1.3. Possible operations exempted from stowage and disposal 1.8.2. Ship generated waste reception service 1.8.3. Passenger service 1.9. Commercial services to the vessel 1.10. Maritime signalling service 1.9.1. Victualling 1.10.1. Types of Aids to navigation 1.10.2. Visual aids 1.9.2. Fuel supply

1.10.3. Acoustic aids

1.10.6. The Marking System Maritime IALA

1.10.4. Radio aids 1.10.5. VTS

Module 2. Planning and Development of Infrastructure and Environmental Sustainability 2.1. Sustainable Port Planning 2.2. Port planning instruments and 2.3. Environmental assessment of 2.4. Project financing of sustainable adaptation to the new climate reality instruments port planning development of port infrastructure 2.1.1. Legislation: Fit for 55 and EU ETS 2.1.2. Relations with other continents 2.3.1. Programs for the development of 2.4.1. The European Investment Bank 2.2.1 Master Plans 2.1.3. Relations with the International Maritime 2.2.2. Planning Tools for Infrastructure infrastructure 2.4.2 The World Bank Organisation (IMO) Development 2.3.2. Evaluation of development plans infrastructure 2.4.3. The Inter-American Development Bank 2.2.3. Port terminal design and redesign: 2.3.3. Evaluation of Infrastructure Projects 2.4.4. International investment funds electrification plans 2.4.5. Issuance of green bonds 2.2.4. Sustainable port-city relations: Climate change and design of port-city spaces 2.5. Ports and coastal erosion: Working 2.6. Renewable energy 2.7. Assessment of the profitability 2.8. Applied BIM technology to ports of investment projects. with Nature investment projects Design of port terminals Design of dock electrification projects MEIPORT methodology 2.5.1. Projects for the preservation of estuaries 2.6.1. Wind power generation projects on shore and 2.8.3. Design of access projects land to ports 2.5.2. Coastal regeneration projects 2.7.1. Analysis of the project context and objectives 2.6.2. Photovoltaic energy projects on shore and 2.5.3. Projects for the re-use of sediments 2.7.2. Alternative analysis off shore 2.7.3. Project definition 2.6.3. Other renewable energy sources 2.7.4. Financial Analysis 2.7.5. Economic Analysis 2.7.6. Sensitivity and risk analysis 2.9. Monitoring instruments and 2.10. Blue Economy protection of the marine 2.10.1. Blue Economy Dimensions environment 2.10.2. Projects for the preservation of marine ecosystems 2.9.1. Measuring nets: buoys, tide gauges and high 2.10.3. Ports and climate research centres and frequency radar marine: towards a long-term relationship 2.9.2. Elements for maritime climate prediction and change scenarios 2.9.3. Projects

tech 26 | Structure and Content

Module 3. Port Security and Security							
	Port Security Port Security Safety and security Regulations and international standards	3.2.1. 3.2.2. 3.2.3.	Technological and Industrial Safety in Ports Management of dangerous goods Prevention of industrial accidents Safety procedures in the handling and transport of goods	3.3.1. 3.3.2. 3.3.3.	Port security Planning for the safety Threat identification and vulnerabilities Risk analysis and assessment protective Risk mitigation strategies. Protection plans	3.4. 3.4.1. 3.4.2. 3.4.3.	Physical and electronic protection Design of physical protection systems Access control and monitoring Security technologies in ports
3.5. 3.5.1. 3.5.2. 3.5.3.	Strategies for port cybersecurity	3.6. 3.6.1. 3.6.2. 3.6.3.	Crisis and Emergency Management Emergency response planning Coordination with agencies public safety Simulations and response exercises		Relations with the Community and Communication in Crisis Importance of communication with the community Communication strategies in crisis situations Corporate social responsibility in ports	3.8.2. 3.8.3.	Management of a Department security Management of public and private security Safety planning Material Resources Human resources management and training
3.9. 3.9.1. 3.9.2. 3.9.3.	Recommendations against risk of fire	3.10.1 3.10.2	Innovation and the Future of Port Security Technological trends in port security Artificial intelligence and data analysis Preparing for future challenges				





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.





tech 30 | Methodology

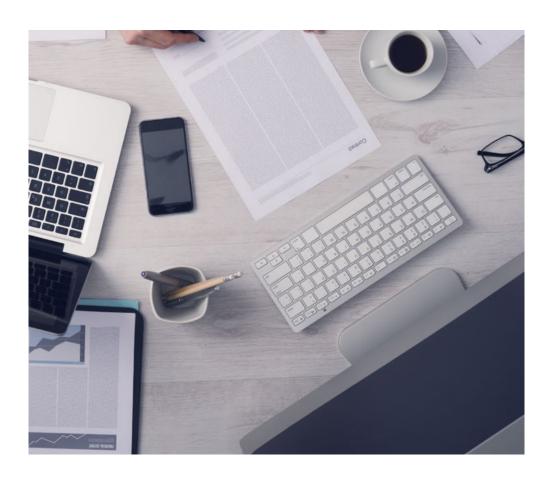
TECH Business School uses the Case Study to contextualize all content

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.





This program prepares you to face business challenges in uncertain environments and achieve business success.



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

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.



You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments"

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

tech 32 | Methodology

Relearning Methodology

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

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

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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 online business school is the only one in the world licensed to incorporate 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 | 33 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. With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.

tech 34 | Methodology

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.



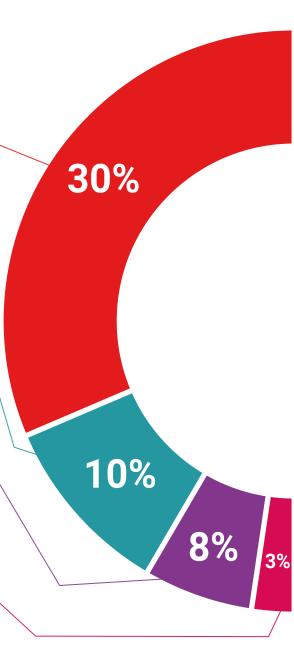
Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



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.





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 senior management 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.

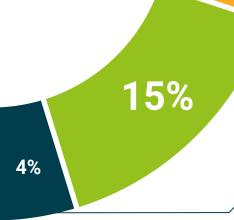


This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

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.

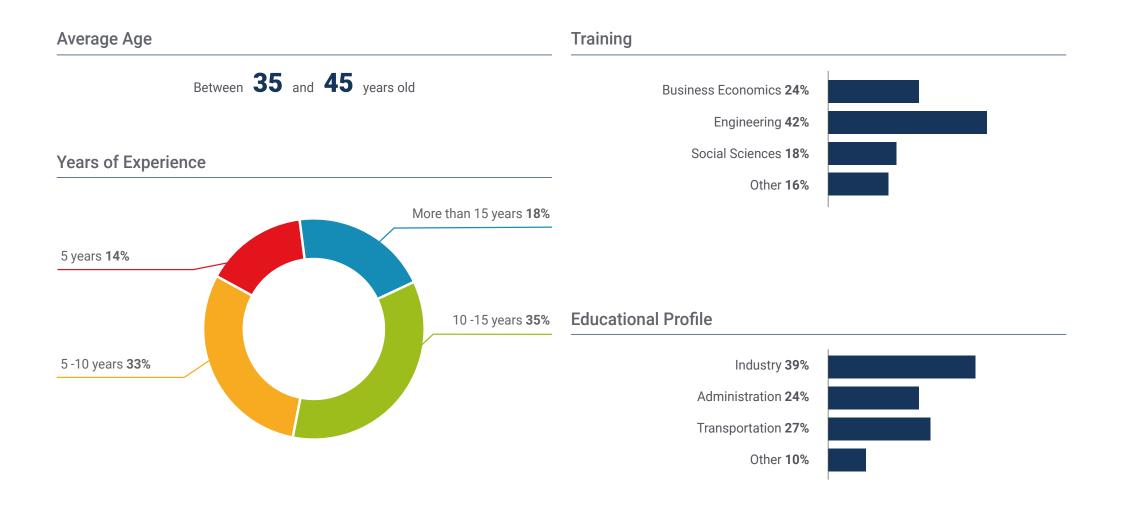




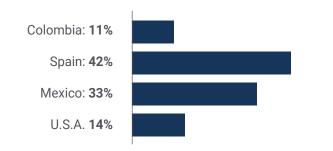
30%







Geographical Distribution





Sara María Urquiza

Social Media and Content Manager

From this program I highlight the ability of the teachers to transmit and share knowledge in a simple, precise and orderly manner. With the balance achieved between theory and practice, the student ends up acquiring the key tools work. It's definitely an investment with great short-term returns"





tech 42 | Course Management

Management



Mr. López Rodríguez, Armando

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

Professors

Mr. Martín Santodomingo, Francisco Javier

- Deputy Director of Operation and Navigation Aids in Ports state
- Head of Division for Maritime Works Projects in the Dragados Group and Construction
- Professional Master's Degree in Port Management and Planning and Intermodality in Ports
 of the State, Polytechnic University of Madrid, University of Oviedo, University of Cádiz and
 University of A Coruña
- Engineer of Roads, Canals and Ports with the specialty in Transport by the Polytechnic University
- Professionak Master's Degree in European Union from the Polytechnic University of Madrid
- Professional Master's Degree in Port Management and Intermodal Transport by ICADE at the Pontifical University of Comilla

Dr. López Ansorena, César

- Postgraduate Diploma in Port Management
- Port Facility Security Officer by competent authority in the field of maritime security
- Director of Private Security recognized by the Ministry of the Interio
- PhD in Civil Engineering Systems (Land and Environment Program) with Outstanding Cum Laude from the Polytechnic University of Madrid
- Civil Engineer from the Polytechnic University of Madrid
- Professional Master's Degree in Intelligence Analysis

Ms. Ana María García

- Chief Advisor to the Presidency of ESPO
- Head of State Port Planning Area
- Head of Human Resources Development in Ports of the State
- Transport and Industry Business Development Manager at Indra
- Head of the Technical Department of Commercial and Marketing in Ports of the State
- Professor of the Professional Master's Degree of Port Management and Planning and Intermodality
- Degree in Psychology Specialty Psychology of Work and Organizations from the Pontifical University of Comillas (ICAI-ICADE) and Complutense University of Madrid
- Professional Master's Degree in Business Administration, IESE, from the University of Navarre
- Leadership Program in Public Management, IESE, by the University of Navarra
- Member of: Port Governance Committee and Member of the General State Administration in the Port Authorities of Motril, Vigo, Gijón, A Coruña, Alicante, Tenerife and Cartagena



Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"





tech 46 | Impact on Your Career

Are you ready to take the leap? Excellent professional development awaits you

The TECH Postgraduate Diploma is an intensive program that prepares you to face business challenges and decisions in the field of Port Management. The main objective is to promote your personal and professional growth. Helping you achieve success.

With TECH you will increase your competences in the application of surface hydrology concepts to natural environments in order to carry out hydrological models of basins.

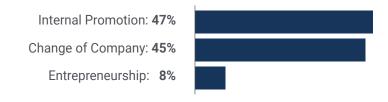
The goal of TECH is you: give your career the boost it needs and specialize in the Port Infrastructure and Sustainability sector.

Enroll now.

Time of Change



Type of change



Salary increase

This program represents a salary increase of more than 25% for our students.

Salary before

\$60,000

A salary increase of

25%

Salary after

\$75,000





tech 50 | Benefits for Your Company

Developing and retaining talent in companies is the best long-term investment.



Growth of talent and intellectual capital

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.



Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.



Building agents of change

You will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.



Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.







Project Development

The professional can work on a real project or develop new projects in the field of R & D or business development of your company.



Increased competitiveness

This program will equip students with the skills to take on new challenges and drive the organization forward.





tech 54 | Certificate

This **Postgraduate Diploma in Port Infrastructure and Sustainability** 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 Diploma** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Port Infrastructure and Sustainability

Official No of Hours: 450 h.



^{*}Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



Postgraduate Diploma Port Infrastructure and Sustainability

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