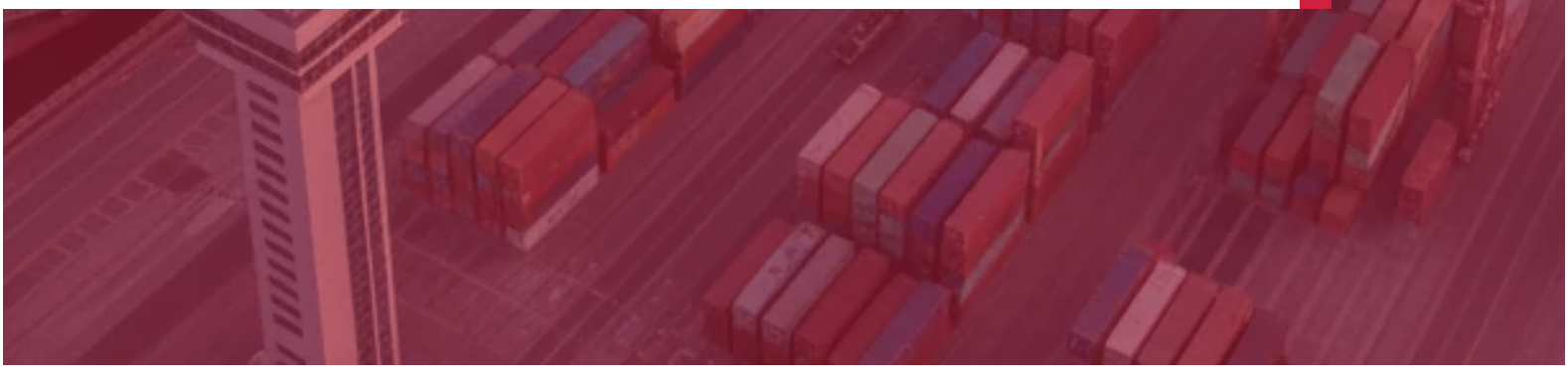


Máster online 100%

Master in Port Infrastructures + 60 ECTS Credits

Structuralia



Máster online 100%

Master in Port Infrastructures + 60 ECTS Credits

Modality
Online

Languages
Español

Duration
1500 hours (60 ECTS)

No Limit
AI Assistant

Does it include practices?
NO

Educational Institutions

Structuralia Engineering eLearning

UNIVERSIDAD NEBRIJA

Summary

The Master in Port Infrastructure is specialized training for professionals in the construction sector based in civil engineering who seek to update and deepen their knowledge in the maritime field. You recognize the strategic relevance of ports as vital nodes for global trade, where 95% of merchandise transport is carried out by sea. This sector, constantly expanding and with a growing focus on sustainability, demands continuous rehabilitation of existing port facilities and the construction of new infrastructure adapted to current challenges. You will face the particularities of maritime engineering, a field where internationalization processes differ significantly from land construction. You will understand how physical environments, specific regulations, and unique construction typologies impact the planning and execution of these structures. This program delves into the characterization of the marine environment, the advanced design of structures, the execution of ports and the comprehensive management of terminals, from their maintenance to their exploitation and operations. You will develop a strategic vision that will allow you to approach maritime works

projects with a technical and leadership perspective, overcoming the deficiencies of generalist training in this crucial field.

Agenda

MODULE 1. CHARACTERIZATION OF THE MARINE ENVIRONMENT. MARITIME WORKS

1. DIDACTIC UNIT 1. Swell

2. DIDACTIC UNIT 2. Wind

3. DIDACTIC UNIT 3. Tides and currents

4. DIDACTIC UNIT 4. Maritime climate measurement and databases

5. DIDACTIC UNIT 5. Coastal dynamics

6. DIDACTIC UNIT 6. Data collection

MODULE 2. PROJECT OF MARITIME WORKS AND STRUCTURES

1. DIDACTIC UNIT 1. PLANNING AND PREDESIGN

2. DIDACTIC UNIT 2. DREDGING AND FILLING WORKS

3. DIDACTIC UNIT 3. SHELTER WORKS

4. DIDACTIC UNIT 4. MOORING AND DOCKING WORKS. ACTIONS

5. DIDACTIC UNIT 5. MOORING AND DOCKING WORKS. DESIGN

6. DIDACTIC UNIT 6. OTHER WORKS

MODULE 3. PORTS EXECUTION

1. DIDACTIC UNIT 1. Introduction

2. DIDACTIC UNIT 2. Typology of maritime works

3. DIDACTIC UNIT 3. Construction procedures

4. DIDACTIC UNIT 4. Materials and their implementation

5. DIDACTIC UNIT 5. Machinery

6. DIDACTIC UNIT 6. Execution planning

MODULE 4. PORT TERMINALS

1. DIDACTIC UNIT 1. RO-RO TERMINALS

2. DIDACTIC UNIT 2. SOLID BULK TERMINALS

3. DIDACTIC UNIT 3. LIQUID BULK TERMINALS

4. DIDACTIC UNIT 4. LNG TERMINALS

5. DIDACTIC UNIT 5. CONTAINER TERMINALS

6. DIDACTIC UNIT 6. PASSENGER TERMINALS

7. DIDACTIC UNIT 7. TERMINAL CONNECTIONS

MODULE 5. MAINTENANCE OF MARITIME WORKS AND STRUCTURES

1. DIDACTIC UNIT 1. Pre-construction and post-construction instrumentation

2. DIDACTIC UNIT 2. Monitoring of environmental parameters

3. DIDACTIC UNIT 3. Inspection of submerged works

4. DIDACTIC UNIT 4. Material durability

5. DIDACTIC UNIT 5. Auscultation of maritime works

6. DIDACTIC UNIT 6. Breakdowns in maritime works and their repair

MODULE 6. MAINTENANCE OF TERMINALS AND FACILITIES IN PORTS AND TERMINALS

1. DIDACTIC UNIT 1. MACHINERY AND GOODS HANDLING EQUIPMENT

2. DIDACTIC UNIT 2. SILOS AND DEPOSITS

3. DIDACTIC UNIT 3. PAVEMENTS

4. DIDACTIC UNIT 4. DISTRIBUTION NETWORKS

5. DIDACTIC UNIT 5. GEOGRAPHICAL INFORMATION SYSTEMS IN THE PORT FIELD

MODULE 7. EXPLOITATION OF PORTS AND TERMINALS

1. DIDACTIC UNIT 1. OPERATIONAL ASPECTS OF THE EXPLOITATION OF GOODS TERMINALS

2. DIDACTIC UNIT 2. OPERATIONAL ASPECTS OF THE OPERATION OF PASSENGER TERMINALS

3. DIDACTIC UNIT 3. ECONOMIC-FINANCIAL ASPECTS OF THE OPERATION OF TERMINALS FROM THE POINT OF VIEW OF THE OPERATOR

4. DIDACTIC UNIT 4. ENVIRONMENTAL ASPECTS

5. DIDACTIC UNIT 5. FACILITY SECURITY

6. DIDACTIC UNIT 6. PORT MANAGEMENT FROM THE POINT OF VIEW OF THE PORT AUTHORITY

MODULE 8. MANAGEMENT AND OPERATIONS OF THE PORT NODE

1. DIDACTIC UNIT 1. MARITIME PORT SECTOR AND PORT TERMINALS

1. The role of ports in the logistics chain
2. Port governance models
3. Agents involved in the maritime port sector
4. Types of ports and port terminals
5. Port-city and port-environment relationships

2. DIDACTIC UNIT 2. TERMINAL OPERATIONS

1. Organization of operations, flows and equipment in port terminals
2. Terminal capacity
3. Terminal automation levels
4. Port terminal connectivity
5. Maritime passenger stations

3. DIDACTIC UNIT 3. MAINTENANCE, ENVIRONMENT AND SAFETY IN TERMINALS

1. Port terminal maintenance
2. Quality control of port operations
3. Environmental aspects of port operations and energy management
4. Maritime and port terminal security
5. Protection in port terminals

4. DIDACTIC UNIT 4. COMPETITIVENESS AND PORT STRATEGY

1. Financing of port terminals
2. Commercial concession and public works concession
3. Evaluation of the competitive position of a port node
4. Competitive improvement strategies
5. Comparative analysis of the behavior between import/export, transshipment and mixed container terminals in service

MODULE 9. ADVANCED PROJECT MANAGEMENT

1. DIDACTIC UNIT 1. SCOPE MANAGEMENT AND CONTRACTUAL MANAGEMENT

1. Session 1. Scope Management I
2. Session 2. Scope Management II
3. Session 3. Scope Management III
4. Session 4. Contract management I
5. Session 5. Contract management II

2. DIDACTIC UNIT 2. NEGOTIATION AND COST CONTROL

1. Session 1. Negotiation I
2. Session 2. Negotiation 2
3. Session 3. Negotiation 3
4. Session 4. Cost control

3. DIDACTIC UNIT 3. COST ESTIMATION AND PLANNING

1. Session 1. Cost estimation 1
2. Session 2. Cost estimation 2
3. Session 3. Cost estimation 3
4. Session 4. Planning 1
5. Session 5. Planning 2
6. Session 6. Planning 3

4. DIDACTIC UNIT 4. RISK MANAGEMENT

1. Session 1. Global environment
2. Session 2. Risk management 1

3. Session 3. Risk management 2
4. Session 4. Risk management 3
5. Session 5. Earned Value Method

MODULE 10. TFM. MASTER INTERNATIONAL IN PORT INFRASTRUCTURES (PORTS)

Qualification

University Degree in Master of Continuing Education in Port Infrastructures issued by the Antonio de Nebrija University with 60 ECTS University Credits. Teaching not leading to the obtaining of an official degree

Objectives

- • Lead the planning and design of port development projects and maritime works, considering their complete life cycle. • Design strategies for the execution of port terminals and maritime structures, optimizing resources and construction procedures. • Manage the characterization of the marine environment for making informed decisions in the development of maritime engineering projects. • Implement predictive and corrective port maintenance models for maritime works and structures, ensuring their operability and durability. • Direct the operation and operational management of terminals, optimizing flows and services. • Evaluate the impact of construction typologies and materials on the sustainability and efficiency of port facilities. • Integrate a global vision in the advanced management of projects in the port field, from the offer to the start-up, with an international focus. • Make strategic decisions in the administration and operations of the port node, improving competitiveness and efficiency.

What does it prepare you for?

This program prepares you to strategically direct the complete cycle of port and maritime engineering projects. You will develop the ability to design and plan maritime works and structures, considering the characterization of the marine environment and the particularities of each environment. You will implement advanced methodologies for the execution of ports and terminals, optimizing resources and construction procedures. You will manage the operation and maintenance of port infrastructure, ensuring its operability and long-term sustainability. This Master trains you for the advanced management of projects and operations of the port node, allowing you to solve complex challenges in the construction and rehabilitation of facilities. You will acquire a comprehensive vision that will allow you to integrate technical, economic and operational aspects in any maritime infrastructure project, consolidating your leadership in the sector.

Who is it addressed to?

Aimed at professionals in the construction and civil engineering sector who are seeking high-level specialization in maritime and port work. If you work in construction companies and feel the need to delve deeper into the particularities of the execution of maritime works, this program offers you the strategic and technical vision you need. Ideal for those seeking to overcome differences in the internationalization processes of maritime projects and complement general training with advanced knowledge in the design of port structures and infrastructure management. Oriented towards profiles with concern for the optimization and development of complex projects in the marine environment.

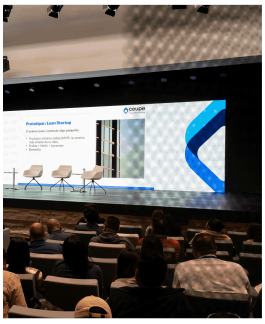
Official Character

This training is not included within the scope of official regulated training (Early Childhood Education, Primary Education, Secondary Education, Official Vocational Training FP, Baccalaureate, University Degree, Master University Officer and Doctorate). It is therefore a complementary and/or specialization training, aimed at the acquisition of certain competencies, skills or aptitudes of a professional nature, which can be assessed as merit in job boards and/or competitive examinations, always within the section of Complementary Training and/or Continuous Training. It is always essential to review the specific grading requirements of the specific public job boards to which we wish to apply.

Professional Outings

- Specialization in the construction and maritime engineering sector positions you to assume highly responsible roles. You will be able to lead teams as Port Project Director, leading the conception, execution and maintenance of complex facilities, with a global vision of the life cycle. You will serve as a Senior Consultant in Maritime Engineering, offering strategic advice on planning, design and optimization of port operations at an international level, addressing the challenges of internationalization in maritime work. You will also assume the role of Port Operations and Operations Manager, optimizing the efficiency and security of logistics nodes and advanced project management. Your profile will be key to decision-making in the strategic planning of terminals and safety supervision in complex maritime environments, ensuring the useful life and performance of infrastructures in the long term.







Live Madrid

Live the International Week

As an additional complement to your training, you can be part of the SIM: Week International in Madrid. A unique meeting that brings together students from all over the world. For seven days you can live an academic and cultural experience in the heart of Europe, culminating with the graduation ceremony in Madrid.

- Conferences and workshops with international experts
- Visits to companies and reference organizations
- Networking with students from different countries
- Cultural activities and discovery of Madrid
- graduation ceremony

Structural

Structuralia is a leading educational institution in postgraduate and highly specialized online training, focused on the fields of engineering, architecture, construction, energy, technology and digital transformation.

Founded in 2001 with a strong industrial DNA, the result of collaboration between large companies in the sector and the Universitat Politècnica de Catalunya (UPC), for more than 25 years we have accompanied technical professionals in their academic and professional development through practical, flexible training aligned with the reality of the labor market.

Our training proposal connects advanced technical knowledge, real employability and international projection, acting as key support in the professional evolution of those seeking to specialize, grow professionally and generate impact in their sector, with a firm commitment to the democratization of access to technical excellence.



+350.000

Students have gone through our virtual classrooms



+20 years

Experience in the training sector



5 stars

QS ranking in online education

EDUCA EDTECH
Group

Educa Edtech GROUP

When you enroll in a course or master's degree, you will get a free subscription to MyLXP while your training lasts. You will have access to more than 400 key courses (soft skills, languages, digital skills, etc.) and other surprises. Sign up and see how MyLXP improves your learning.

EDUCA LXP Methodology

The comprehensive tailored online education experience

EDUCA LXP is more than a methodology, it is a completely educational experience personalized thanks to all the possibilities offered by artificial intelligence. Now the content adapts to you, your needs and preferences, while offering you access to updated and practical content that really makes a difference in the labor market.

Flexibility

100% online learning adapted to your schedule: study from any device wherever, whenever and however you want.

Personalization

Contents and training itineraries adapted to your needs, thanks to AI.

Innovation

Constantly evolving technological developments driven by AI through the Learning Experience Platform.

Artificial intelligence

Discover PHIA, your learning assistant that will help you every step of the way.

Teaching support

Human empathy and academic guidance from a specialized teaching team.

Educational Experience

Didactic approach oriented to work by competencies, which favors practical and meaningful learning.

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When you enroll in a course or master's degree, you will get a free subscription to MyLXP while your training lasts

You will have access to more than 400 key courses (soft skills, languages, competencies digital, etc.) and other surprises. Sign up and see how MyLXP improves your learning.

Meet PHIA, your personalized learning assistant

Use all the possibilities of artificial intelligence to get the most out of it match to your training

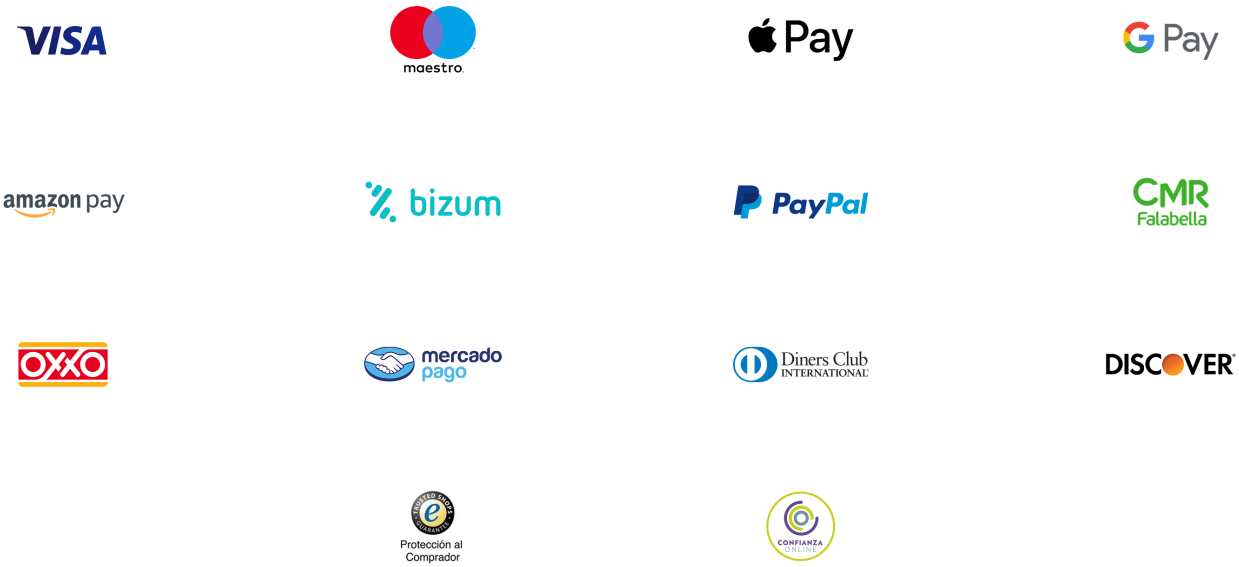
EDUCA EDTECH Group leads the digital revolution in education, promoting the continuous learning and technological transformation. The group is made up of recognized training institutions and its mission is to democratize access to education, promote the transfer of knowledge, technological development and research.

With the experience accumulated over more than 20 years, we have perfected our learning platform EDUCA LXP (Learning Experience Platform), the basis of our educational methodology, which provides students with online training practical and meaningful.



Discover all the payment facilities

We adapt to all international payment methods.



Funding and scholarships

Finance your course or master's degree and enjoy the available scholarships. Contact our expert team to know which one best suits your profile.

25%
Alumni Scholarship

15%
Scholarship recommended

20%
Functional Diversity Scholarship

20%
Unemployment scholarship

15%
GROUP Scholarship

20%
Scholarship for Professionals, Healthcare, members

15%
Entrepreneurship Scholarship

20%
Large Family Scholarship