

Máster online 100%

# Master in Business Administration and Management in Engineering and Construction Projects + 60 ECTS Credits

Structuralia

Máster online 100%

# Master in Business Administration and Management in Engineering and Construction Projects + 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 Business Administration and Management in Engineering and Construction Projects is an Expert training for professionals in the infrastructure sector who seek specialization in Engineering Project Management and Business Management in Construction. This strategic program prepares you for the management of advanced construction projects, addressing scope and contractual management, crucial elements for the success of any initiative. You will delve into negotiation techniques, cost control in engineering, accurate estimation and strategic planning, essential tools for making financial decisions. You will develop a solid understanding of risk management, identifying and mitigating potential deviations. You will master project financing, from projections to the application of Project Finance in international contexts. You will explore business financial management, understanding accounting logic and the balance sheet for a comprehensive view of the business. In addition, you will become familiar with marketing strategies and agile methodologies in projects such as Scrum, optimizing execution. You will prepare to lead engineering

and construction initiatives, integrating a global and strategic vision to drive the growth and internationalization of your business.

# Agenda

## MODULE 1. 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: Contractual 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 2. FINANCIAL PROJECT MANAGEMENT

### 1. DIDACTIC UNIT 1. FINANCIAL PROJECTIONS AND PROJECT FINANCING

1. time value of money
2. Investment evaluation methods
3. Preparation of financial projections.
4. Quality of financial projections and residual value.
5. Project financing sources.
6. Cost of capital and debt level of the project. Evaluation of projects with uncertain results.

### 2. DIDACTIC UNIT 2. PROJECT FINANCE

1. Introduction to the financing model
2. Project Finance.

3. Project risk analysis.
4. Project financing.
5. Entities involved in the financing of the project.
6. Ratios and management of project financing.

### 3. DIDACTIC UNIT 3. INTERNATIONAL PROJECTS

1. Development of financing in international projects.
2. Country Risk Management.
3. Sources of financing in international projects.

### 4. DIDACTIC UNIT 4. SERVICE PROJECTS

1. Financial management of service projects.
2. Identification of costs in service projects.
3. Allocation of costs to services.
4. Establishment of the service budget.
5. Economic monitoring and closure of the service.

## MODULE 3. BUSINESS FINANCIAL MANAGEMENT

### 1. DIDACTIC UNIT 1. ACCOUNTING LOGIC AND THE BALANCE SHEET

1. The accounting logic
2. The Balance Sheet
3. The Daily Book and the General Ledger
4. Accounting principles
5. The most common balance sheet accounting entries (I)
6. The most common balance sheet accounting entries (II)

### 2. DIDACTIC UNIT 2. THE PROFIT AND LOSS ACCOUNT

1. Income and expenses
2. The profit and loss account
3. The most common accounting entries for income and expenses (I)
4. The most common accounting entries for income and expenses (II)
5. The Cash Flow Account

### 3. DIDACTIC UNIT 3. ANALYSIS OF ANNUAL ACCOUNTS AND FINANCIAL STRATEGY

1. Analysis of the evolution of the Balance Sheet
2. Strategy to ensure liquidity
3. Strategy to ensure solvency
4. Leverage and Financial Profitability
5. Analysis through economic and financial ratios

### 4. DIDACTIC UNIT 4. BUSINESS MANAGEMENT AND INVESTMENT DECISIONS

1. The financial system
2. Financial mathematics
3. Investment Decisions. The VAN
4. Investment decisions. The IRR

# MODULE 4. CORPORATE SOCIAL RESPONSIBILITY

## 1. DIDACTIC UNIT 1. THE RESPONSIBLE AND SUSTAINABLE ORGANIZATION

1. Fundamentals of the Socially Responsible Organization
2. Socially Responsible Features
3. Value Creation and CSR

## 2. DIDACTIC UNIT 2. THE OBJECTIVES AND MANAGEMENT OF CSR IN ORGANIZATIONS

1. Formulation of CSR objectives
2. Planning and programming of CSR activities
3. Integration of CSR into the organization's global strategy

## 3. DIDACTIC UNIT 3. INTEREST GROUPS OR STAKEHOLDERS

1. Interest Groups
2. Concept and Typology of "stakeholders"
3. Relations with Interest Groups
4. CSR and Stakeholders

## 4. DIDACTIC UNIT 4. THE MANAGEMENT OF SOCIALLY RESPONSIBLE COMPANIES

1. Sustainable Responsible Company Management
2. Corporate Governance
3. Management Ethics in the Responsible and Sustainable Company
4. Ethical and CSR audits
5. The design of a CSR action program

## 5. DIDACTIC UNIT 5. CONCEPT AND HISTORY OF CSR

1. Concept of Corporate Social Responsibility
2. Historical background of CSR
3. The Beginnings of CSR

## 6. DIDACTIC UNIT 6. CONSTRUCTION OF CSR AND ITS ELEMENTS

1. Long Term Vision vs. Short Term Vision
2. Building a Socially Responsible Company
3. What elements should CSR contain?

## 7. DIDACTIC UNIT 7. CORPORATE SOCIAL RESPONSIBILITY AND SOCIAL MARKETING

1. Introduction to Social Marketing
2. Characteristics of Social Marketing
3. Social Responsibility and ethics in Marketing
4. Types of Social Marketing
5. Social Marketing and Social Responsibility
6. The expansion of the marketing concept
7. Social Marketing Plan
8. Company results with Corporate Social Marketing programs

### 8. DIDACTIC UNIT 8. TRADITIONAL VALUES VS. RESPONSIBLE VALUES

1. Values and principles of the traditional company
2. Values and principles of the responsible and sustainable company
3. Common good and own good

## MODULE 5. AGILE MANAGEMENT APPROACH

### 1. DIDACTIC UNIT 1. BASICS OF THE AGILE APPROACH

1. Agility as a response to the changing environment
2. Evolution of organizational thinking
3. Key principles of the agile approach from a strategic perspective
4. Adaptive mindset and learning culture
5. Factors that hinder or favor agile adoption

### 2. DIDACTIC UNIT 2. VALUE AND CUSTOMER AT THE CENTER

1. Value delivery as the axis of agile work
2. Deep understanding of user needs
3. Early validation: reducing risk and uncertainty
4. Impact indicators vs performance indicators
5. Continuous feedback and iterative learning

### 3. DIDACTIC UNIT 3. TEAMS AND AGILE COLLABORATION

1. Self-organized teams and principles of autonomy
2. Distributed decision making
3. Construction of environments of trust and psychological safety
4. Coordination and communication in dynamic environments
5. Managing interdependence between teams

### 4. DIDACTIC UNIT 4. AGILE AND ADAPTIVE ORGANIZATIONS

1. From team agility to organizational agility
2. Flexible structures versus traditional hierarchies
3. Distributed and facilitative leadership
4. Continuous innovation cycles throughout the organization
5. The challenge of agile strategic alignment

### 5. DIDACTIC UNIT 5. DESIGN OF ENVIRONMENTS FOR AGILITY

1. Physical and virtual spaces that promote collaboration
2. Technology and tools as enablers (not protagonists)
3. Rituals and practices that encourage constant learning
4. Visual management and operational transparency
5. Learning by doing: agile experience design

### 6. DIDACTIC UNIT 6. AGILE IMPLEMENTATION AND TRANSFORMATION

1. Common myths in transformation processes
2. Approaches to start a transition towards agility
3. Maturity models and agile diagnosis

4. Resistance to change: effective approach
5. Practical application cases in various sectors

## MODULE 6. ARTIFICIAL INTELLIGENCE

### 1. DIDACTIC UNIT 1. INTRODUCTION TO ARTIFICIAL INTELLIGENCE

1. State of the art of artificial intelligence
2. Philosophy of artificial intelligence
3. Future of artificial intelligence
4. Project development processes with artificial intelligence
5. Data, your greatest asset

### 2. DIDACTIC UNIT 2. TYPES OF ARTIFICIAL INTELLIGENCE

1. Machine learning
2. Deep learning
3. Transformers
4. Synthetic data generation
5. Hyperparameters in artificial intelligence models

### 3. DIDACTIC UNIT 3. INTRODUCTION TO MACHINE LEARNING ALGORITHMS

1. Linear regression
2. Nonlinear Regression and Support Vector Machine (SVM)
3. Decision trees and random forests
4. Fuzzy logic and gradient descent
5. Recommendation systems

### 4. DIDACTIC UNIT 4. TURNKEY PROJECT WITH ARTIFICIAL INTELLIGENCE

1. Preparing the work environment: Anaconda, Visual Studio Code and Python
2. Data entry and data processing dataset
3. TensorHub, TensorFlow and Keras
4. Image processing
5. Generation of artificial intelligence models

## MODULE 7. DIGITAL MARKETING

### 1. DIDACTIC UNIT 1. INTRODUCTION TO DIGITAL MARKETING AND THE ECOMMERCE WORLD

1. Understanding Digital Marketing and E-Commerce
2. Digital Marketing Ecosystem - Roles and functions of the Digital Marketing Officer
3. The Digital Strategy
4. E-commerce, m-commerce and s-commerce
5. Digital Business and Technological Linkage

### 2. DIDACTIC UNIT 2. INBOUND MARKETING VS OUTBOUND MARKETING

1. Definition of Inbound and Outbound Marketing
2. Digital marketing to attract and retain customers
3. Content Marketing
4. Social Media and Community management

5. Digital Marketing Plan

### 3. DIDACTIC UNIT 3. ADVANCED DIGITAL MARKETING

1. SEO
2. SEM
3. Programmatic Marketing and RTB
4. Strategy and performance techniques
5. Email Marketing

### 4. DIDACTIC UNIT 4. WEB ANALYTICS TOOLS

1. Understanding the User. Customer Experience, UX & UI
2. Data Science & Big Data
3. Data Visualization
4. Google Analytics
5. Digital Metrics and Digital Marketing Trends

## MODULE 8. PUBLIC-PRIVATE COLLABORATION

### 1. DIDACTIC UNIT 1. PUBLIC-PRIVATE PARTNERSHIP CONTRACTS (PPP): CONCEPT, BENEFITS AND LIMITATIONS.

1. Effects of infrastructure on economic development.
2. Financing structures: Public vs. Private.
3. Models and structures of public-private collaborations.
4. Public-private collaboration contracts in the world.
5. Identification of public-private collaboration projects.

### 2. DIDACTIC UNIT 2. FRAMEWORK FOR THE APPLICATION OF PUBLIC-PRIVATE PARTNERSHIP CONTRACTS.

1. Regulatory and institutional framework of public-private collaborations: COOMON LAW vs CIVIL LAW
2. Fiscal analysis of public-private collaborations: capacity and impact on the deficit
3. Economic analysis of public-private collaborations
4. Financial analysis of public-private collaborations
5. Stakeholders

### 3. DIDACTIC UNIT 3. EVALUATION OF PUBLIC-PRIVATE COLLABORATION PROJECTS.

1. Technical, economic and financial viability of public-private collaboration projects.
2. Social and environmental viability of public-private collaboration projects.
3. Risk allocation in public-private collaboration contracts.
4. The concept of Value for Money.
5. Definition of the offer criteria and advertising of the project.

### 4. DIDACTIC UNIT 4. MANAGEMENT OF THE PUBLIC-PRIVATE COLLABORATION CONTRACT.

1. Tendering and awarding process for public-private collaboration contracts.
2. Definition of the financial structure of the contract.

3. Contract management in the construction phase and in the operation phase.
4. Renegotiation of infrastructure concession contracts.
5. Termination of the contract and transfer of assets.

## MODULE 9. MANAGEMENT SKILLS

### 1. DIDACTIC UNIT 1. MANAGEMENT SKILLS (I)

1. Introduction to management skills
2. Authority and inspiration
3. Leadership. Key personal and managerial skills
4. Approaches in leadership theory

### 2. DIDACTIC UNIT 2. MANAGEMENT SKILLS (II)

1. The role of the leader
2. Administrative functions of leadership
3. Leadership styles

### 3. DIDACTIC UNIT 3. SOCIAL SKILLS IN GROUP MANAGEMENT (I)

1. What are social skills?
2. Assertiveness
3. Empathy

### 4. DIDACTIC UNIT 4. SOCIAL SKILLS IN GROUP MANAGEMENT (II)

1. active listening
2. Self-esteem
3. Emotional management in group relationships

### 5. DIDACTIC UNIT 5. PERSONALITY AND SKILLS OF THE NEGOTIATOR

1. The personality of the negotiator
2. Negotiator skills
3. Personal preparation prior to negotiation

### 6. DIDACTIC UNIT 6. THE NEGOTIATOR AND NEGOTIATIONS

1. Characteristics of the negotiating subject
2. Negotiator classes
3. Ethics and values in the behavior of the negotiator

### 7. DIDACTIC UNIT 7. PSYCHOLOGY IN NEGOTIATIONS

1. Persuasion and influence techniques
2. Psychology in negotiation
3. Perception and cognitive biases in negotiation
4. Non-verbal behavior and its interpretation

### 8. DIDACTIC UNIT 8. JOB STRESS

1. Causes of Work Stress
2. Symptoms of work stress

MODULE 10. FINAL PROJECT MASTER MBA IN BUSINESS DIRECTION AND MANAGEMENT IN ENGINEERING AND CONSTRUCTION PROJECTS

## Qualification

University Degree in Master of Lifelong Training in Business Administration and Management in Engineering and Construction Projects issued by the Antonio de Nebrija University with 60 ECTS University Credits. Teachings not leading to obtaining an official qualification

## Objectives

- • Lead the planning, execution and control of engineering and construction initiatives, optimizing scope and contractual management. • Direct project financing, from projections to the implementation of Project Finance in international contexts. • Design advanced strategies for cost estimation and control, and effective negotiation in the engineering and construction sector. • Comprehensively manage the risks inherent to the projects, developing effective mitigation and response plans. • Base strategic decisions on a deep accounting and financial analysis, understanding the business balance sheet. • Integrate agile methodologies such as Scrum and marketing strategies to optimize project execution.

## What does it prepare you for?

This program prepares you to lead the management of engineering and construction projects with a global strategic vision, transforming your management and decision-making capacity. You will develop advanced project management skills, from negotiation and engineering cost control to detailed estimating and planning. You will learn to design financing strategies, including Project Finance and financial projections for international and service projects. You will manage complex risks and make business decisions based on solid accounting logic and balance sheet analysis. The Master in Business Administration and Engineering and Construction Project Management trains experienced professionals in strategic project management to promote the internationalization of their business, applying management techniques that ensure effectiveness in each phase of the project.

## Who is it addressed to?

Aimed at professionals in the infrastructure sector, including concessionaires, construction, maintenance, engineering and consulting companies. If you work in the technical field or in economic and business disciplines, and are looking to expand your professional skills towards management and general direction, this master's degree offers you the necessary strategic vision. It is ideal for those who wish to progress in the sector, acquiring advanced skills in strategic infrastructure management and construction risk management for professional development and business growth. It guides you to internationalization and the efficient management of complex projects.

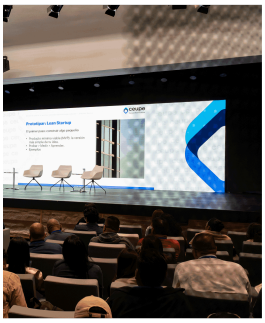
## Official Character

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 engineering and construction project management prepares you to assume highly responsible roles in the infrastructure sector. You will position yourself as an International Project Director, leading complex initiatives from conception to delivery, managing scope and contracts effectively. You will develop the skills to be a Construction Manager who optimizes planning and cost control, or an Infrastructure Financial Management Manager, managing projections and project financing. Additionally, you will be able to work as a Strategic Engineering Consultant, advising concessionaire, construction and maintenance companies in making critical decisions and risk management. This training boosts your ability to grow your business in a context of internationalization, managing service projects and applying advanced accounting logic for business success.







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

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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.

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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.

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

MY LXP

## 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

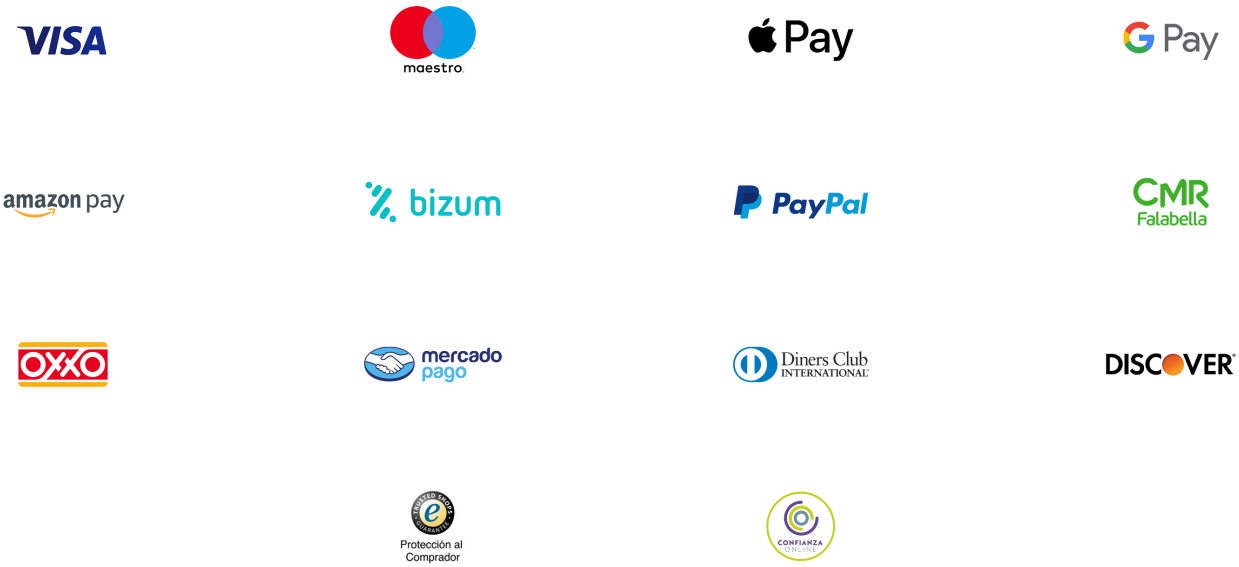
EDUCA EDTECH Group leads the digital revolution in education, promoting the continuous learning and technological transformation. The group is made up of recognized training institutions and its mission is to democratize access to education, promote the transfer of knowledge, technological development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

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Scholarship recommended

20%
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Unemployment scholarship

15%
GROUP Scholarship

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Large Family Scholarship