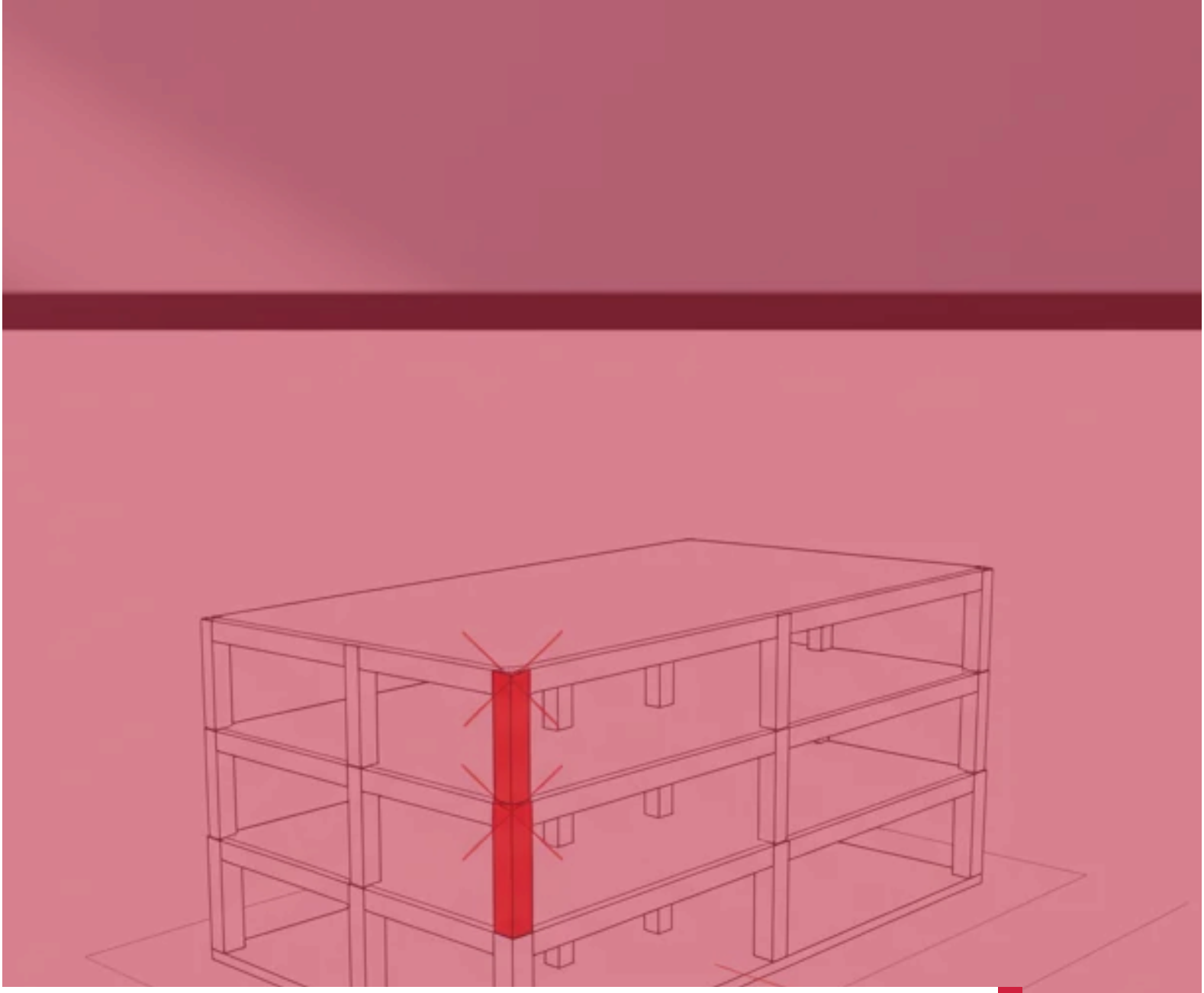


Máster online 100%

Master in BIM Management + 60 ECTS Credits

Structuralia

Máster online 100%

Master in BIM Management + 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 BIM Management is the strategic specialization for professionals in the Architecture, Engineering and Construction (AEC) sector who seek to lead the digital transformation and management of highly complex projects. This advanced program will allow you to delve deeper into the BIM methodology, transcending the mere tool to offer you a comprehensive approach to project management, coordination and collaboration. You will explore techniques, methods and technological tools that redefine execution standards in the industry, allowing you to optimize workflows and inform strategic decisions. You will develop an essential management mindset to manage complex projects, integrating a global vision of the construction life cycle, from immersion in BIM and digital transformation to advanced project management. You will equip yourself with the knowledge to effectively implement the BIM methodology in technical offices, mastering concepts, resources, documentation and standards, guaranteeing efficiency and quality in each phase. This master's degree is designed for professionals seeking to master project management under the BIM

framework, facing the challenges inherent to the evolution of the sector with an innovative and leadership perspective, and understanding the regulations applicable at a global level.

Agenda

MODULE 1. BIM. IMMERSION INTO BIM

1. DIDACTIC UNIT 1. BIM AND DIGITAL TRANSFORMATION

1. Digital transformation
2. Digitalization in the construction industry
3. What is BIM?
4. Why BIM?
5. Why does BIM fail?

2. DIDACTIC UNIT 2. BIM AND OPENBIM AND THEIR REGULATIONS

1. BIM dimensions
2. BIM software and its relationship with BIM dimensions
3. BuildingSMART and its contributions to the industry
4. BIM in the world
5. ISO 19650

MODULE 2. BIM. BIM TERMINOLOGY

1. DIDACTIC UNIT 1. BASIC CONCEPTS OF BIM MANAGEMENT

1. BIM
2. Life cycle of a BIM project
3. Resources for managing the BIM methodology
4. BIM uses in project planning
5. BIM uses in the construction of a project

2. DIDACTIC UNIT 2. BIM METHODOLOGY RESOURCES AND DOCUMENTATION

1. BIM Roles
2. BIM documents
3. Documentation structure and nomenclature
4. BEP BIM Execution Plan
5. CDE - common data environment

3. DIDACTIC UNIT 3. THREE-DIMENSIONAL MODELS AND BIM STANDARDS

1. Types of models
2. Generalities of integrated models
3. Modeling regulations and standards
4. Development levels - LOD+LOI
5. Classification systems

4. DIDACTIC UNIT 4. HOW TO IMPLEMENT BIM?

1. BIM implementation
2. BIM maturity levels
3. Phases and requirements for BIM implementation

4. Processes and workflows in BIM
5. Open BIM

MODULE 3. BIM. BIM PROJECT MANAGEMENT

1. DIDACTIC UNIT 1. INTRODUCTION TO PROJECT MANAGEMENT

1. Project Management Principles
2. Due Diligence and preliminary studies
3. Project cycle
4. Human resources, positions, profiles and skills
5. Start of the project, matrix of stakeholders and project constitution

2. DIDACTIC UNIT 2. PROJECT PLANNING

1. Project timeline
2. Project budget
3. Procurement matrix and risk matrix
4. Responsibilities and communications matrix
5. Negotiations and contracts

3. DIDACTIC UNIT 3. PROJECT MANAGEMENT AND DIRECTION

1. Evaluation and financial analysis of projects
2. Project monitoring and control
3. Cost management
4. Occupational health and safety
5. Project closure

4. DIDACTIC UNIT 4. PROJECT OPERATION AND OTHER CURRENT METHODOLOGIES

1. Project operation and maintenance
2. Project sustainability certification
3. Project management software
4. Agile methodologies
5. Lean Construction

MODULE 4. BIM. BIM CHALLENGES. PROJECT TYPES

1. DIDACTIC UNIT 1. BIM CHALLENGES. TYPE OF PROJECTS (I)

1. Vertical housing
2. Horizontal housing
3. Winery complexes
4. Industrial projects
5. Infrastructure projects

2. DIDACTIC UNIT 2. BIM CHALLENGES. TYPE OF PROJECTS (II)

1. Mobility projects
2. Renovations
3. Power generation projects
4. Hospital projects

5. Mining projects

MODULE 5. BIM. THREE-DIMENSIONAL MODELS. FEATURES AND FUNCTIONALITY

1. DIDACTIC UNIT 1. LOCATIONS, DATA EXTRACTION AND PROJECT LOCATION

1. Locations
2. Topography
3. Data collection, photogrammetry and point clouds (I)
4. Data collection, photogrammetry and point clouds (II)
5. Architectural models

2. DIDACTIC UNIT 2. STRUCTURAL MODELS AND FACILITIES

1. Structural models
2. Revit Structure
3. MEP installation models
4. Hydrosanitary installations
5. Electrical and special installations

3. DIDACTIC UNIT 3. CIVIL WORK MODELS AND APPLICATIONS

1. HVAC installations
2. Autodesk InfraWorks
3. Autodesk Civil 3D
4. OpenRoads Designer
5. OpenRail Designer

4. DIDACTIC UNIT 4. REVIEW OF MODELS WITH BIM VIEWERS

1. BIM Viewers (I): BIM Vision
2. BIM Viewers (II): Solibri Anywhere
3. BIM Viewers (III): Trimble Connect
4. BIM Viewers (IV): usBIM Viewer
5. Autodesk Navisworks Manage

MODULE 6. BIM. MODEL MANAGEMENT IN REVIT

1. DIDACTIC UNIT 1. TOOLS FOR MANAGING A MODEL

1. What is managing a project in Revit?
2. Planning tables
3. Planning tables applied to a structure model
4. Planning tables applied to a hydraulic installations model
5. Planning tables applied to a model of electrical installations

2. DIDACTIC UNIT 2. INTERDISCIPLINARY COLLABORATION TECHNIQUES

1. Project phases
2. Design options
3. Team Workflows in Revit
4. Linking models in Revit
5. Worksets (Subprojects)

MODULE 7. BIM. BIM COORDINATION

1. DIDACTIC UNIT 1. BASIS OF BIM COORDINATION

1. BIM Coordination
2. Project management
3. BIM coordination roles
4. Work methodology
5. Collaborative work

2. DIDACTIC UNIT 2. INTRODUCTION TO REVIT

1. Template Settings
2. Phases of a project
3. File export and import
4. Collaboration in Revit
5. Working with worksets

3. DIDACTIC UNIT 3. FEDERATED MODELS AND INTRODUCTION TO NAVISWORKS

1. Federated models
2. IFC Models
3. Introduction to Navisworks
4. Interference analysis
5. Construction simulation

4. DIDACTIC UNIT 4. COLLABORATIVE WORK

1. Interoperability in BIM
2. Open BIM
3. Collaboration with specialists
4. Collaboration options
5. Autodesk Coordination Platform

MODULE 8. BIM. ANALYSIS AND MANAGEMENT OF INCIDENTS

1. DIDACTIC UNIT 1. PROCESSES AND CONCEPTS WITHIN A COLLABORATIVE PROJECT

1. Basics
2. Incident management processes and techniques
3. Introduction to the cloud project
4. Navisworks Manage
5. Navisworks as an incident manager

2. DIDACTIC UNIT 2. OPTIONS TO MANAGE INCIDENTS

1. Autodesk Construction Cloud and its work tools
2. BIM Collaborate Docs to Manage Incidents
3. BIM Collaborate Model Coordination to manage incidents
4. BIMcollab
5. BIM Track

MODULE 9. BIM. CONSTRUCTION MANAGEMENT

1. DIDACTIC UNIT 1. STRATEGIES IN CONSTRUCTION.

1. Generation of construction strategies
2. Construction Strategies to Increase Productivity
3. Evaluation of construction strategies
4. Technical documents
5. Diagnosis of critical paths of projects

2. DIDACTIC UNIT 2. AUTODESK CONSTRUCTION CLOUD

1. Folder structure
2. Communication flows
3. Communication management
4. Construction Review
5. Key views and permissions

3. DIDACTIC UNIT 3. PLANNING AND CONTROL OF WORK

1. Planning and work control
2. Constructibility and planning
3. Operations planning
4. Monitoring and control of work
5. Work progress

4. DIDACTIC UNIT 4. MEASUREMENTS AND COSTS

1. Budget in BIM environments
2. Information structure
3. Measurements
4. Budgets
5. BIM requirements for construction

MODULE 10. BIM. FACILITIES MANAGEMENT

1. DIDACTIC UNIT 1. STATE OF THE ART BIM

1. Definitions from the industry
2. Industrial methodologies and tools
3. Facilities Management
4. Operation
5. Maintenance

2. DIDACTIC UNIT 2. PROCESSES AND PROCEDURES

1. BIM for Facilities Management projects
2. Initial BIM inputs in Facilities Management
3. Interoperability
4. ECD standards application
5. Archibus

MODULE 11. BIM. BIM IN THE AEC BUSINESS

1. DIDACTIC UNIT 1. STATE OF THE ART BIM

1. What is and what is not BIM?
2. AEC BIM, determining factors
3. More than software
4. Basic terminology
5. BIM implementations

2. DIDACTIC UNIT 2. PROCESSES AND PROCEDURES

1. Implementation budget
2. Definitions for analysis
3. Diagnosis and improvement proposals
4. Improvement proposal
5. Measurement, evaluation and continuous improvement

MODULE 12. BIM. VISUAL PROGRAMMING WITH DYNAMO

1. DIDACTIC UNIT 1. INTRODUCTION TO DYNAMO

1. Introduction to Dynamo
2. Nodes (Visual Programming Anatomy)
3. Packages and Scripts
4. Main operations
5. Lists and Data Extraction

2. DIDACTIC UNIT 2. INFORMATION MANIPULATION

1. Import and Export to Dynamo
2. Interact with Revit
3. Optimize processes (I)
4. Optimize processes (II)
5. Basic geometries

MODULE 13. BIM. BIM EXPANSION

1. DIDACTIC UNIT 1. BIG DATA, ARTIFICIAL INTELLIGENCE AND SMART CITIES

1. Introduction to Big Data
2. Big Data and BIM
3. Artificial intelligence
4. Cities
5. Smart Cities

2. DIDACTIC UNIT 2. SUSTAINABILITY, ENERGY EFFICIENCY AND GIS

1. Sustainability
2. Sustainable construction
3. Energy efficiency
4. BIM and Energy Efficiency
5. GIS and BIM

MODULE 14. TFM. MASTER IN BIM MANAGEMENT

Qualification

University Degree in Master of Lifelong Training in BIM Management issued by the Antonio de Nebrija University with 60 ECTS University Credits. Teachings not leading to obtaining an official qualification

Objectives

- • Lead the implementation of project management strategies in collaborative environments. • Integrate applicable regulations into the design and execution of projects, ensuring compliance and operational efficiency. • Design and implement the construction information modeling methodology at scale in technical offices, transforming operational processes. • Manage highly complex projects, anticipating and resolving challenges with a directive and strategic approach. • Evaluate and select advanced technological tools for the design, coordination and comprehensive management of projects. • Lead multidisciplinary teams in the adoption of OpenBIM workflows, promoting interoperability and efficiency. • Optimize resource and cost management in BIM projects, maximizing profitability and operational efficiency. • Make strategic decisions based on BIM data analysis for continuous project improvement.

What does it prepare you for?

This master's degree prepares you to direct the implementation and management of the BIM methodology in engineering, construction and architecture projects. You will develop strategic criteria to define workflows, model standards and coordination protocols between disciplines. You will learn to manage collaborative BIM environments, lead technical teams and make decisions about technology, processes and resources with a direct impact on the quality and efficiency of the project. Upon completion, you will have the profile and tools to assume the responsibility of BIM Manager in highly complex projects. Upon completion, you will have the technical resources to intervene with greater rigor in your professional field and make better-informed decisions.

Who is it addressed to?

Professionals from the Architecture, Engineering and Construction (AEC) sector seeking high-level specialization in the BIM methodology to lead complex projects. If you are an architect, civil engineer, construction office administrator, project manager or construction supervisor, and you need to update your skills for the AEC digital transformation, this training is for you. It is also designed for technological innovation leaders with an interest in integrating project management with a BIM approach. If you face increasing demand for highly complex projects and seek to master the tools and techniques for efficient coordination and collaboration, you will boost your career with this specialization.

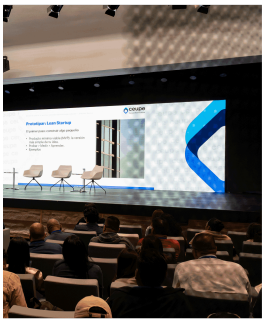
Official Character

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

- The specialization in BIM Management strategically positions you in the Architecture, Engineering and Construction (AEC) sector, facilitating access to highly responsible roles. You will be able to assume the direction of complex projects, leading multidisciplinary teams and guaranteeing the integration of the BIM methodology in all its phases. You will consolidate your profile as a BIM Manager, orchestrating the implementation and monitoring of models in construction companies and engineering studies. You will also be able to serve as a BIM Coordinator, ensuring coherence and resolution of interferences between the different disciplines in highly complex projects. If your interest is focused on consulting, you can work as a BIM Consultant specialized in projects, including for government entities, providing your expert vision in the application of standards and regulations. In addition, the training prepares you for critical supervision roles such as Auditor or Construction Inspector, where your knowledge in BIM project management will be essential for the control and quality of constructions. This specialization will consolidate your position for making strategic decisions in the industry.







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.



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Meet PHIA, your personalized learning assistant

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

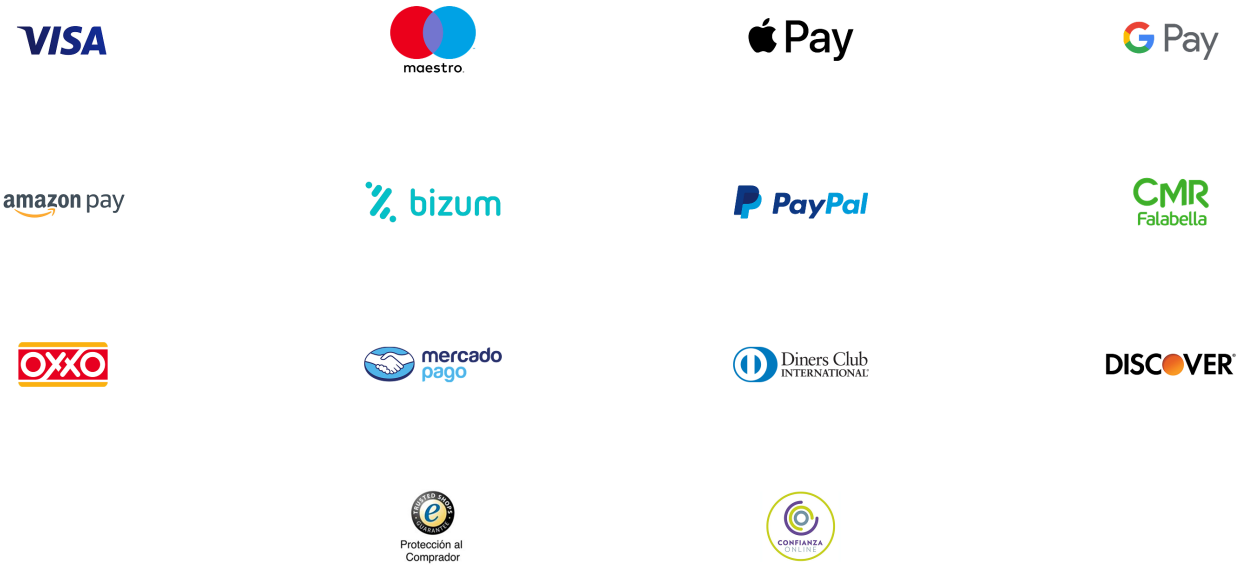
EDUCA EDTECH Group leads the digital revolution in education, promoting the continuous learning and technological transformation. The group is made up of recognized training institutions and its mission is to democratize access to education, promote the transfer of knowledge, technological development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



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