

Máster online 100%

Master in Intelligent Mobility. Smart Mobility + 60 ECTS Credits

Structuralia

Máster online 100%

Master in Intelligent Mobility. Smart Mobility + 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 Intelligent Mobility. Smart Mobility is the strategic specialization for consulting professionals, managers and policy makers who seek to lead the transformation of travel in urban environments. This program equips you with the essential tools to design, develop, implement and analyze policies and initiatives that optimize the movement of citizens and goods, integrating the opportunities offered by civic technologies and digital transformation to improve transportation management in complex environments. Working with the vision of Buchanan Consultores, international leaders in transportation planning and urban development, this master's degree condenses advanced technical knowledge. You will cover everything from the fundamental concepts that define sustainable mobility and its regulatory framework, to the economics of transportation, including pricing systems and analysis of investments in infrastructure. You will delve into the Sustainable Urban Mobility Plans (SUMP) and the Transportation Plans for Workers (PTT), crucial elements for efficient and strategic management. You will develop a deep understanding of economic regulation and its direct impact on transportation systems, preparing you to make informed and strategic decisions in a constantly evolving sector. This master's degree encourages

you to be an agent of change, capable of facing the current and future challenges of mobility with innovative and sustainable solutions, applying a global and technical vision.

Agenda

MODULE 1. INTRODUCTION TO MOBILITY

1. DIDACTIC UNIT 1. BASIC CONCEPTS IN SUSTAINABLE URBAN MOBILITY

1. Introduction to basic mobility concepts
2. Economic aspects of mobility
3. Social aspects of mobility
4. Functional aspects of mobility: evolution and implementation of mobility measures
5. The need for sustainable mobility plans

2. DIDACTIC UNIT 2. REGULATORY FRAMEWORK

1. The global shift towards sustainable mobility
2. Multilateral organizations and the development of mobility
3. United States and its environmental policy
4. European Union and urban mobility directives
5. Spain and the development of urban mobility

3. DIDACTIC UNIT 3. BASIC CONCEPTS IN SUSTAINABLE URBAN MOBILITY

1. Asia, Africa and urban transport policies
2. Mobility policies in Latin America
3. United States, Canada and urban mobility
4. Europe and sustainable mobility actions
5. Spain and the development of sustainable mobility through specific cases

4. DIDACTIC UNIT 4. SUSTAINABLE URBAN MOBILITY PLANS (SUMP) AND TRANSPORTATION PLANS FOR WORKERS (PTT)

1. PMUS Basics
2. Sustainable urban mobility plans (SUMP) II: Phases
3. Sustainable urban mobility plans (SUMP) III: Fundamentals for mobility planning. Performances
4. PTT Basics
5. PPT: Plan development

MODULE 2. TRANSPORTATION ECONOMICS

1. DIDACTIC UNIT 1. FUNDAMENTAL CONCEPTS OF MICROECONOMICS

1. User and utility function
2. Demand and the concept of elasticity
3. Supply and production cost
4. The functioning of urban transport service markets. Perfect competition
5. The functioning of urban transport services markets. Monopoly

2. DIDACTIC UNIT 2. ECONOMIC REGULATION AND URBAN MOBILITY

1. Competition and externalities in transportation
2. The need to regulate urban passenger transport

3. Transportation as a public service and the common interest
4. Economic regulation criteria
5. Regulation methods based on efficiency

3. DIDACTIC UNIT 3. TRANSPORTATION RATING SYSTEMS

1. Transportation pricing process
2. Pricing rules
3. Pricing following the principles of efficiency and equity
4. Pricing alternatives
5. Effects of pricing criteria, intermodal effects

4. DIDACTIC UNIT 4. ANALYSIS OF INVESTMENTS IN TRANSPORT AND URBAN MOBILITY

1. Capacity investments
2. Economic evaluation of investments
3. Decision criteria
4. Risk analysis
5. Income distribution, social welfare and decision criteria.

MODULE 3. PUBLIC TRANSPORTATION AND INTERMODALITY

1. DIDACTIC UNIT 1. PUBLIC TRANSPORTATION AND INTERMODALITY, PILLARS FOR SUSTAINABLE MOBILITY.

1. The role of public transport.
2. Public transport by bus
3. Public transportation by rail. Metro and railway
4. Taxi and VTCs.
5. Introduction to intermodality.

2. DIDACTIC UNIT 2. PUBLIC TRANSPORTATION IN URBAN AREAS

1. Public transportation operation.
2. Reserved platform.
3. Transportation on demand.
4. User information systems.
5. Universal accessibility in public transport.

3. DIDACTIC UNIT 3. PUBLIC TRANSPORTATION PLANNING

1. Network planning and structuring.
2. Route and fleet management.
3. Stops and stations
4. Design of integrated public transport networks
5. Evaluation by indicators

4. DIDACTIC UNIT 4. INTERMODAL APPLICATIONS

1. Public transport integration
2. Transport interchanges
3. Parking facilities.

4. Tariff integration
5. Existing barriers to intermodal transport

MODULE 4. NON-MOTORIZED MOBILITY

1. DIDACTIC UNIT 1. THE IMPORTANCE OF NON-MOTORIZED AND ACTIVE MOBILITY

1. History of pedestrians and bicycles in the city
2. Hierarchization of transport modes by sustainability, health and economy.
3. Travel on foot in urban environments
4. The bicycle as an urban mode of transportation
5. The new VMP personal mobility modes

2. DIDACTIC UNIT 2. PEDESTRIAN MOBILITY

1. Accessibility
2. Signage and orientation
3. Urban furniture
4. Comfort
5. road safety

3. DIDACTIC UNIT 3. CYCLE MOBILITY AND VMP

1. Regulatory framework
2. public road
3. Public and/or shared bicycle and VMP systems
4. Parking and intermodality
5. Training and education

4. DIDACTIC UNIT 4. PUBLIC SPACE AND SUSTAINABLE MOBILITY

1. The compact city
2. The structure of the territory
3. Social cohesion
4. The design of public space
5. The urban rules

MODULE 5. ROAD FUNCTIONALITY AND MANAGEMENT

1. DIDACTIC UNIT 1. SUSTAINABLE DESIGN OF THE ROAD NETWORK

1. Classification and hierarchy of the urban road network
2. Infrastructure design
3. Unique configurations
4. Road junctions
5. Crossing points, prioritization and traffic lights

2. DIDACTIC UNIT 2. FUNDAMENTAL TRAFFIC PARAMETERS

1. Characterization of traffic in urban centers
2. Access and main conflicts
3. Traffic and mobility studies
4. Coexistence with other modes of transport

5. Accident rates and accidents

3. DIDACTIC UNIT 3. SPECIFIC AND COMPLEMENTARY ACTIONS

1. Definition of itineraries
2. Urban road reorganization
3. traffic calming
4. Road signs
5. Universal accessibility and gender perspective

4. DIDACTIC UNIT 4. TRAFFIC AND PARKING MANAGEMENT

1. Restrictions on vehicle circulation
2. Regulation of parking in urban centers
3. Urban distribution of goods
4. Traffic control and management centers
5. Road safety audits

MODULE 6. TECHNOLOGICAL INTEGRATION OF MOBILITY

1. DIDACTIC UNIT 1. TRANSIT TOWARDS TECHNOLOGICAL AND ENERGY EFFICIENCY:

1. Polluting emissions and the impact of the transportation sector
2. Reference environmental regulations
3. Analysis and usefulness of life cycles. Green Ncap Initiatives
4. Didactic Challenges and Opportunities of New Technological Developments
5. Alternative fuels

2. DIDACTIC UNIT 2. SMART CITY & SMART MOBILITY

1. From the digital city to smart cities
2. Smart Cities
3. The power of data in transportation planning
4. Intelligent traffic and public transport management
5. Other smart technologies

3. DIDACTIC UNIT 3. MOBILITY AS ASERVICE

1. MaaS and the new mobility
2. Objectives, advantages, drawbacks and challenges of MaaS
3. MaaS in the urban mobility planning process
4. MaaS system governance
5. Real cases of MaaS system

4. DIDACTIC UNIT 4. TECHNOLOGICAL INNOVATIONS IN MOBILITY

1. Advanced data analytics
2. Civic technologies
3. Shared mobility
4. autonomous vehicle
5. The city of the future

MODULE 7. MOBILITY MODELING

1. DIDACTIC UNIT 1. INTRODUCTION TO TRANSPORTATION MODELS

1. Introduction to transportation systems modeling
2. Typical information needs and data sources
3. Revealed Preference Surveys
4. Stated preference surveys
5. Other data collection exercises

2. DIDACTIC UNIT 2. 4 STAGE MODELS (PART I)

1. The 4-stage model
2. Zoning of the study area
3. Trip generation model
4. Travel attraction model
5. Zonal distribution model

3. DIDACTIC UNIT 3. 4 STAGE MODELS (PART II)

1. Discrete choice models.
2. Logit models
3. Modal split model
4. Network allocation models (I)
5. Network assignment models (II)

4. DIDACTIC UNIT 4. OTHER TRANSPORT MODELS

1. Traffic microsimulation.
2. Road traffic emissions models.
3. Pedestrian microsimulation
4. New modeling techniques in real time.
5. Land-use models

MODULE 8. GOVERNANCE AND FINANCING OF URBAN MOBILITY

1. DIDACTIC UNIT 1. TRANSPORT POLICY AND METROPOLITAN GOVERNANCE.

1. Govern metropolitan areas.
2. Variables of metropolitan governance.
3. Metropolitan governance models.
4. Institutions, Values and Actors.
5. The metropolization of European policies.

2. DIDACTIC UNIT 2. THE GOVERNANCE OF MOBILITY.

1. From transport to mobility
2. Elements to analyze the articulation between the state, company and society in a comparative framework.
3. The evaluation criteria: Governance and justice.
4. Governance, governance and neoliberal governance.
5. The articulation of neoliberal governance.

3. DIDACTIC UNIT 3. THE FINANCING OF PUBLIC TRANSPORTATION.

1. The importance of financing in urban transport.
2. The current financing model.
3. The challenge of financing sustainable urban transport.
4. Financing instruments for the sustainable system.
5. The current transport financing model in Spain.

4. DIDACTIC UNIT 4. TOOLS FOR THE CHOICE OF PUBLIC TRANSPORTATION PROJECTS: MULTICRITERIA ANALYSIS AND CBA.

1. The tools for choosing public transport projects.
2. Multicriteria decision systems.
3. Multicriteria Methodologies.
4. Financial analysis and cost-benefit analysis.

MODULE 9. SOCIAL PARTICIPATION AND COMMUNICATION FOR SUSTAINABLE MOBILITY

1. DIDACTIC UNIT 1. BASIC PRINCIPLES OF CITIZEN AND ADMINISTRATIVE PARTICIPATION

1. What is citizen participation?
2. Work ecosystem
3. Focus and harmonization of participation
4. Participatory process development
5. Implementation of a participation process

2. DIDACTIC UNIT 2. TOOLS AND INSTRUMENTS FOR PARTICIPATION IN PLANNING

1. Participation instruments
2. Initial moment
3. Moment of mobilization
4. Execution time
5. Moment of effects and results

3. DIDACTIC UNIT 3. COMMUNICATION AND DISCLOSURE FOR PARTICIPATORY PROCESSES

1. Importance of communication in participatory processes
2. Communication planning in projects
3. Marketing strategies
4. Communication and dissemination tools
5. Conflict management and resolution

4. DIDACTIC UNIT 4. PEOPLE-CENTERED MOBILITY

1. Mobility and participatory governance
2. Gender perspective and generational approach to mobility
3. Open data and dissemination of knowledge among citizens
4. Access to information to create solutions
5. Practical experiences

MODULE 10. TFM. MASTER SMART MOBILITY

Qualification

University Degree in Master's in Continuing Education in Smart Mobility. Smart Mobility issued by the Antonio de Nebrija University with 60 ECTS University Credits. Education not leading to the attainment of an official degree

Objectives

- • Critically evaluate the foundations of contemporary urban mobility and its interconnection with economic and social factors. • Design innovative strategies for the promotion of public transport and non-motorized modes, promoting sustainability in citizen movement. • Implement the principles of intelligent transportation systems (ITS) in the planning and management of urban infrastructure. • Integrate the management of road and digital infrastructure to optimize the efficiency, safety and resilience of transportation systems. • Analyze international policy and regulatory frameworks that govern mobility planning, ensuring compliance and innovation. • Manage the implementation of Sustainable Urban Mobility Plans (PMUS) and Transportation Plans for Workers (PTT) at a strategic scale. • Make strategic decisions based on the application of economic regulation principles and investment analysis in the transportation sector. • Lead the transformation of mobility in complex urban environments, anticipating trends and proposing disruptive solutions.

What does it prepare you for?

This program prepares you to lead the evolution of urban mobility systems, providing you with a strategic vision and advanced tools for decision-making. You will train as a professional in the strategic management of urban transportation, trained to transform the sustainability and efficiency of cities. You will develop the ability to design and implement Sustainable Urban Mobility Plans (SUMP) and Transportation Plans for Workers (PTT), integrating the regulatory framework and the fundamental economic concepts of transportation. You will evaluate the impact of travel policies and manage complex projects, applying pricing systems and investment analysis. You will master economic regulation and its influence on mobility, allowing you to anticipate trends and propose innovative solutions. You will transform transportation management in your organization, promoting sustainability and efficiency through the application of Smart Mobility principles.

Who is it addressed to?

Consulting professionals, project managers in the public and private spheres, and workers from government institutions or City Councils will find in this program a high-level specialization in transportation planning. It is also designed for political decision-makers interested in updating and deepening their knowledge. If you work in the transportation or urban planning sector and seek to integrate civic technologies and digital transformation to address mobility challenges in current and future cities, this program offers you the strategic tools to design, develop and implement sustainable urban mobility policies and actions.

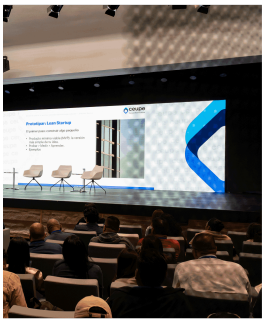
Official Character

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 urban transportation systems management will position you in highly responsible roles in the transportation and city planning sector. You will be able to lead the transformation as Sustainable Mobility Project Director, designing and implementing initiatives that integrate civic technologies and digital transformation. You will assume the role of Responsible for Planning Sustainable Transportation Systems, managing the preparation of Sustainable Urban Mobility Plans (PMUS) and Transportation Plans for Workers (PTT), applying in-depth knowledge of the regulatory framework. You will also serve as a Strategic Consultant in Smart Mobility, advising public and private organizations in the optimization of their transportation systems, evaluating investments and designing efficient pricing systems. In addition, you can be an Intelligent Transportation Policy Manager or a Specialist in Urban Mobility Regulation, directly influencing the development of more connected and sustainable cities.







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.

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

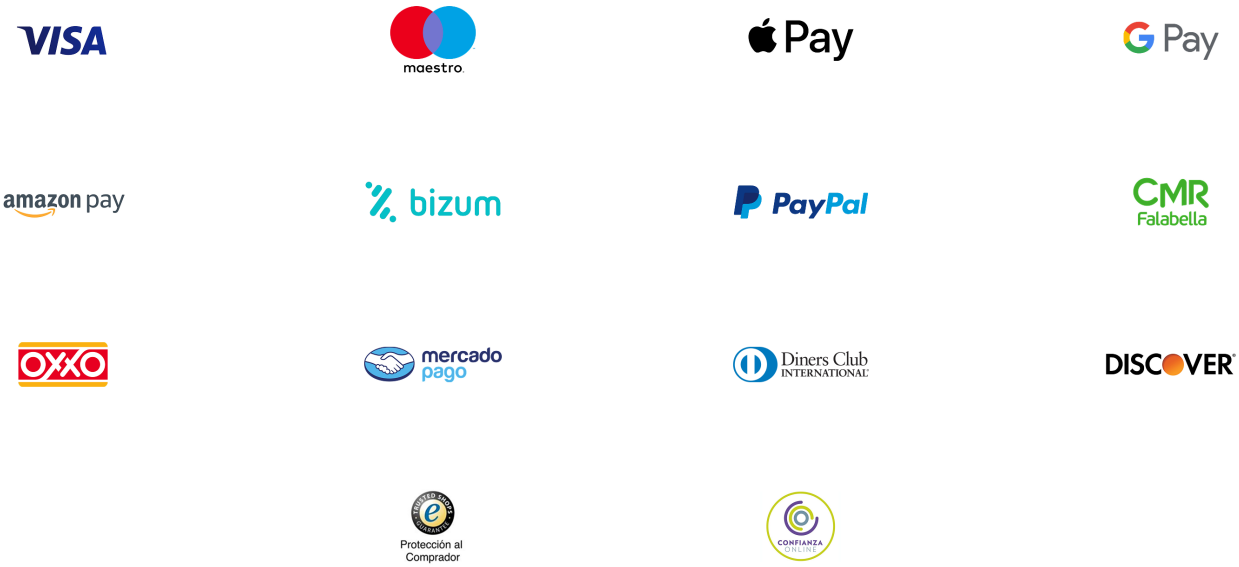
EDUCA EDTECH Group leads the digital revolution in education, promoting the continuous learning and technological transformation. The group is made up of recognized training institutions and its mission is to democratize access to education, promote the transfer of knowledge, technological development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

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