Professional Master's Degree

Design of Sustainable Green Infrastructures

tech technological university

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Professional Master's Degree

Design of Sustainable Green Infrastructures

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/pk/engineering/professional-master-degree/master-design-sustainable-green-infrastructures**

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01

Introduction

The general urban planning trend is clearly directed towards greater care for green spaces and the environment. Closely related to the well-being and even the health of people, it is undeniable that the focus on Sustainable Green Infrastructures is one of the engineering fields with the greatest future projection. This specialty requires, as it can not be otherwise, professionals and experts updated in the trends, innovations and approaches of greater depth today. All these issues are the focus of this program, developed by a team of specialists in architecture and design that will provide the engineers with the most urgent developments in planning, management and maintenance of Green Infrastructures, supported by the best 100% online methodology.

Enroll now in this Professional Master's Degree and stand out as a cutting-edge engineer, deepening in Biology and ecology of the landscape, Arboriculture and Ecosystem Restoration"

Nowadays, urban green areas are still perceived as static elements, typical of public beautification or ornamentation, and not as generators of first level ecosystem services for society. Plans such as the United Nations Sustainable Development Goals or the commitments for total decarbonization by 2050 are gradually changing this paradigm, giving the necessary prominence to Sustainable Green Infrastructures in all urban planning.

This poses numerous challenges, as issues such as the protection of biodiversity, ecosystems and their services or resilience to climate change must be addressed by specialists in the field, with a holistic view of the engineering and design of the infrastructures of the future. Thus, the demand for highly qualified and updated professionals is growing, both in the private and public sectors.

This Professional Master's Degree in Design of Sustainable Green Infrastructures puts the engineering professionals at the forefront of urban planning, perfecting their handling of the most advanced tools for planning, designing, quantifying, mapping and valuing the ecosystem services that will provide the green infrastructure with purpose and functionality. Thus, they will be able to attract financing in a much more efficient way, by demonstrating that the investment made represents an economic return, but also a social and environmental one.

The teaching staff of this program is made up of top-level professionals from public administrations, as well as international consultants. Foresters, architects, urban planners and experts in sustainable infrastructure management have designed the entire syllabus, offering a unique perspective on issues such as the Revitalization of Green Zones, the Technical Planning of Urban Tree Planting or the Strategic Planning of Urban Green Infrastructure.

All of this is provided in a convenient 100% online format, free from the usual burden of face-to-face classes and fixed schedules. On the contrary, it is the students themselves who decide how to manage all their class time, being able to organize it as they see fit at all times. The contents of the Virtual Campus are accessible from any device with an Internet connection 24 hours a day, even allowing you to download them and study them later from your tablet, smartphone or computer of choice.

This **Professional Master's Degree in Design of Sustainable Green Infrastructures** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts in Design of Sustainable Green Infrastructures
- The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Lead the urban change of the future with the keys provided by this Professional Master's Degree, developed by the best experts in Sustainable Green Infrastructures"

Delve into the design of ecological functionalities, tools for monitoring environmental status and management models to improve the habitability of the most avant-garde"

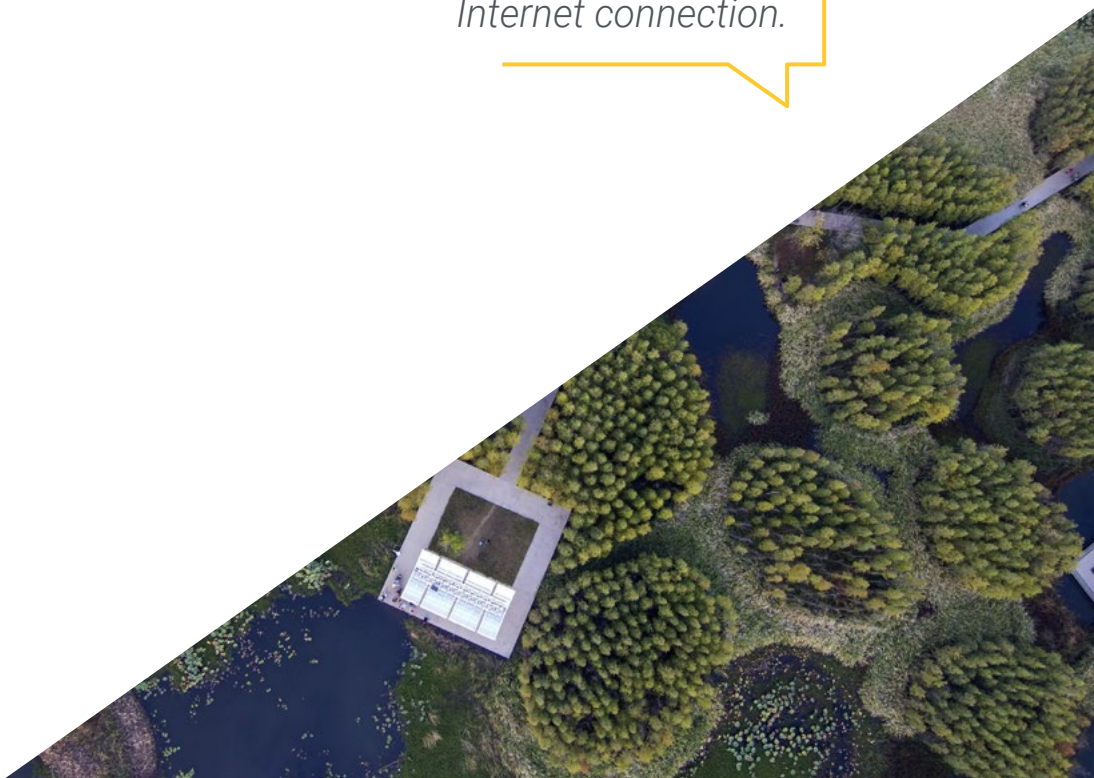
Enroll now in this program and do not miss the opportunity to analyze, through practical and real cases, the most successful models of sustainable urban infrastructure today.

Access all the material whenever you want from any device with Internet connection.

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professionals with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professionals must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.



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Objectives

Considering that the trend towards green urban spaces is growing and unstoppable, the primary objective of this Professional Master's Degree could not be other than to provide the engineers with the keys, tools and working techniques with which to update themselves in a booming field. Thus, the entire program will have a strong practical approach, guided by the examples and case studies analyzed throughout the program.

Incorporate into your work methodology the most current urban analysis and monitoring tools, with a focus on sustainable green spaces and infrastructures"

General Objectives

- Provide a rationale for the current context of sustainable urban development
- Analyze the main global reference strategies for Sustainable Urban Development
- Protecting and promoting Urban Biodiversity
- Communicate through visualization of good environmental management
- Analyze different nature-based solutions as city transformers

You will be able to rely on a qualification that will boost your management of Sustainable Urban Green Infrastructures based on international benchmark models worldwide"

Specific Objectives

Module 1. Dynamization of Green Zones

- Substantiate the dynamization as a vital part of an urban green area
- Analyze the different options that each green zone offers us
- Develop attractive and coherent proposals that are not supported by public entities
- Identify the weak points of a green infrastructure and mitigate them with dynamic proposals
- Analyze, in early projects, where private investment can act in a green infrastructure
- Determine which activities or facilities are likely to be implemented
- Evaluate the economic and social impact of the implemented leisure activities
- Analyze the small and large infrastructures to be installed in green areas, children's areas, use and maintenance
- Compile the different options offered by leisure in existing green spaces
- Demonstrate that properly implemented leisure is a saving for the public purse and a very beneficial source of attraction
- Examine the type of dynamic recreation that a green space can support

Module 2. Urban Green Infrastructure Strategic Planning

- Analyze the key concepts in strategic planning of green infrastructure, within the existing policy or regulatory framework and possible scenarios
- Develop the possible phases necessary to carry out strategic planning, ranging from objective setting, information gathering and analysis, participation, situation diagnosis, action plans to monitoring and evaluation or communication
- Demonstrating the effectiveness of strategic planning through real-life success stories
- Connecting natural capital and consolidating urban green infrastructure
- Rethink investment and management towards models based on sustainability and the fight against climate change
- Encourage participation. Implement in the management itself the processes that promote citizen participation and involvement in the development of the city's green infrastructure
- Advance in the rebalancing of the city's green infrastructure, establishing a system of dynamic diagnosis of the city's green infrastructure to derive strategic proposals that correct imbalances, identify opportunities and enhance the differentiating values of the neighborhoods and promote new centers
- Periodically evaluate the actions proposed in the plan with a commitment to address the results with actions
- Improve communication and awareness and guarantee citizens' right of access to information related to green infrastructure

Module 3. Monitoring and follow-up of indicators and technology applied to the management and planning of sustainable urban infrastructure

- Generate specialized knowledge on technologies for the development and monitoring of indicators
- Establish strategies for prioritizing actions based on indicators
- Analyze environmental impacts on cities and the need to have objective data to improve them
- Determining the system of indicators best suited to the improvement objective being pursued
- Elaborate a good prior diagnosis based on indicators to be successful in the elaboration of strategic plans
- Examine the different categories of indicator groups
- Substantiate the *Smart City* as an example of technology incorporation for the improvement of quality of life
- Evaluate existing data visualization and analysis systems
- Analyze the potential of Earth Observation data for the generation of Urban Sustainability indicators

Module 4. Infrastructure to improve the livability of cities

- Examine the ecosystem services that green infrastructure offers us
- Develop methodologies for analyzing the impact of green infrastructure on people's quality of life
- Analyze new techniques to promote the development of green infrastructure
- Generate opportunities for the participation of stakeholders in the management of green infrastructure and in the enjoyment of its ecosystem services
- Analyze the ESSES offered by the IVU in cities
- Evaluate the economic and social impact of the benefits of UVI on the health and quality of life of citizens
- Develop the therapeutic benefits of IVs as health recuperators
- Identify the actors involved in the management and promotion of IV to achieve holistic management of their EHCS
- Analyze how to involve citizens by managing stakeholders' expectations
- Discover success stories and innovative experiences in the field of IVU management

Module 5. Infrastructures for urban resilience

- Develop the concepts of urban resilience to climate change and analyze adaptation and mitigation needs and the difference between the two
- Analyze the elements of green infrastructure that are directly or indirectly related to urban adaptation to change
- Assess the direct relationship between exposure to nature and public, physical, and mental health
- Recognize the elements of green infrastructure present in our immediate environment in the city
- Identify the items of contribution to energy efficiency of green infrastructure elements
- Evaluate the implication of green infrastructure on the health and well-being of the inhabitants of the urban environment. Socialization and empowerment of the sense of belonging
- Evaluate the projection of current green infrastructure actions for future cities

Module 6. Social infrastructures and experiences of Urban Green Infrastructure (IVU)

- Generate specialized knowledge on the planning and management of an urban park
- Apply citizen participation methodology in the different steps of planning formulation
- Analyze the strategic and operational planning of urban parks
- Understand and encourage active citizen participation in parks
- Examine different urban park management models
- Understand the strategic partners of parks
- Determine the importance of user-driven park design
  Identify, design and implement tools for participatory analysis and design
- Identify, design and implement participatory analysis and design tools

Module 7. Technical planning of urban trees

- Train in the study of the diagnosis of a city's tree population
- Examine the services and disservices provided by ornamental public trees
- Acquiring skills for the management of public trees
- Learn how to assess using specific calculation tools
- Face the problems of creating new spaces where existing trees need to be introduced or modified in a sustainable manner

- Identify the main barriers to management based on ecosystem services for urban tree species
- Inventory and identify the most common tree management problems
- Apply valuation standards
- Elaborate tree master plans
- Manage trees in urban works and infrastructures
- Identify the danger parameters of a tree and the work to be carried out in each case to minimize risk
- Develop tools for the selection of species adapted to climate change
- Establish monitoring programs for tree management based on KPIs

Module 8. Sustainable Urban Infrastructure Planning

- Determine the aspects and objectives on which green infrastructure has the greatest impact on the sustainable development of towns and cities
- Develop the different strategies and initiatives for sustainable development at a global level
- Analyze the concept of Urban Sustainability
- Explore the main objectives and challenges of sustainable urban development strategies
- Examine the objectives of sustainable development most closely linked to urban development, cities and green infrastructure
- Assess the different experiences implemented by city networks and reference cities at the global level
- Raise awareness and empower students in the field of sustainable urban development

Module 9. Measuring, quantifying, valuing and mapping ecosystem services

- Analyze the rationale for measuring Ecosystem Services
- Identify ecosystem services assessment tools
- Examine ecosystem services measurement and valuation models
- Establish the products and needs for each tool
- Determine the set of ecosystem services that can be assessed by each tool
- Carry out a comparison of ESS assessment tools with the standard criteria
- Deepen the management of i-Tree
- Size the projects according to the particularity of the ecosystem services and the type of infrastructure to be quantified
- Evaluate the gaps and opportunities for improving the quality of EESS based on the data obtained
- Propose governance for ecosystem-based adaptation

Module 10. Natural capital in urban infrastructures

- Develop the concept of Nature, a new paradigm of economy
- Analyze the global framework for biodiversity and natural capital
- Identify the components of urban green infrastructure
- Learn to value the importance of nature
- Assessing the risks and opportunities associated with the new global framework
- Substantiate the new global legislative framework in relation to biodiversity and natural capital

- Determine the new European legislative framework and the implications for business
- Identify the components of urban green infrastructure: assets and ecosystem services
- Establish frameworks for measuring, valuing and accounting for nature's benefits to society and frameworks for measuring, valuing and accounting for impacts
- Examine the sustainability standards for urban infrastructure
- Categorize and understand the different risks to nature
- Evaluate the opportunities associated with the natural capital approach
- Compile natural capital and ecosystem services-based management and financing models
- Analyze in early projects where private investment in green infrastructure can play a role
- Realizing Nature-Based Solutions and natural capital
- Evaluate the economic and social impact of Nature-Based Solutions

You will be able to rely on a qualification that will boost your management of Sustainable Urban Green Infrastructures based on international benchmark models worldwide"

03

Skills

The paradigm shift that the urban environment is undergoing must be led by engineers and specialists who are able to value the investment models and social benefits provided by the new infrastructures, as opposed to the traditional models of spending and management of means in a static way. This requires developing and perfecting a specific and cutting-edge set of competencies, which is precisely the focus of this Professional Master's Degree. Upon graduation, the students will be able to establish new management models to improve the livability and resilience of cities, applying nature-based solutions (NBS) to reverse unsustainable grey infrastructures.

Become an expert and reference in the management of the stock of renewable and non-renewable resources that produce flows of benefits to society"

General Skills

- Participate in multidisciplinary projects and strategies to address the planning and management of the city and territory in the 21st century
- Determine the useful tools to be used in each of the phases of the planning process
- Analyze the different strategic frameworks of existing indicators
- Develop management, planning and participatory measures to contribute to the livability of cities
- Determine how to integrate biodiversity and natural capital into urban infrastructures

Drive unstoppable urban change with the implementation of sponsored innovation and research projects in the field of green infrastructure"

Specific Skills

- Evaluate different urban sustainability monitoring indicators
- Create specific monitoring services depending on what it is intended for
- Evaluate how to maximize the benefits of the urban forest substrate through living tree surrounds
- Analyze the effects of climate change on cities
- Determine adaptation tools
- Propose concrete actions in the urban environment for the enhancement of strategies for the implementation of green infrastructure and define the scope of citizen participation in the development
- Elaborate innovative projects in urban parks
- Master the urban planning instruments related to public trees
- Design a program of management guidelines based on functionality and benefits
- Mapping and quantification of results

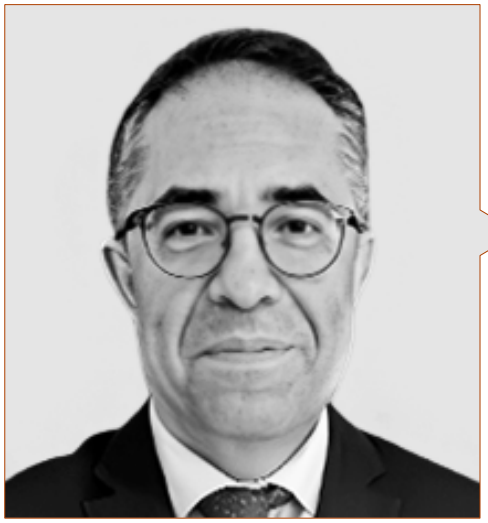
04

Course Management

Given the importance and breadth of specialties covered by the Design of Sustainable Green Infrastructure, the teaching staff of this program also includes a range of specialists and experts in different areas of green urbanism. Thus, they are referents with extensive experience in public and private management of urban infrastructures, so that their knowledge comes first hand from the most prestigious and at the same time most demanding environments in sustainable urban design.

Analyze a multitude of real cases and practical examples arising from the professional experience of an expert and advanced teaching staff"

Management



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- Business Development Director at Green Urban Data
- Senior Sustainability Consultant for Large Corporations and Public Administrations
- Manager of the Urban and Environmental Services Division of Grupo Ferrovial
- Manager of Climate Change and Biodiversity of Grupo Ferrovial
- Forestry Engineer from the Polytechnic University of Madrid
- Specialization in Silvopastoral Farming
- Postgraduate degree in Conservation and Maintenance of Urban Green Zones from the Polytechnic University of Madrid
- Executive Management Program by the Instituto de Empresa

Professors

Ms. García San Gabino, Beatriz

- Technical Advisor, Juan Carlos I Park, Madrid
- General Director of Water Management and Green Areas of the Madrid City Council
- Head of the Department of Green Areas and Parks Rehabilitation of the Madrid City Council
- Head of the Department of Projects and General Direction of Green Heritage
- Forestry Engineer from the Polytechnic University of Madrid
- Specialization in Silvopastoral Farming
- Master in Advanced Studies in City Sciences, Polytechnic University of Madrid
- Master's Degree in Public Policy Management and Analysis
- Degree in Planning, Management and Evaluation of Local Public Management, Geographic Information Systems of Green Heritage

Mr. Ferrer Gisbert, José Miguel

- Innovation Director and Co-Founder of Green Urban Data
- CEO of study CeroCO2
- Architect and Collaborator in Landscaping and Gardening in several studies
- Graduate in Architecture from the Polytechnic University of Valencia
- Specialization in Urbanism
- Master's Degree in and Landscaping from the Polytechnic University of Valencia
- Member of: Agrupación de Arquitectura y Medioambiente (COACV), Foro para la Edificación Sostenible en la Comunidad Valenciana (Forum for Sustainable Building in the Valencian Community), Agrupación de Arquitectes pel Paisatge (Association of Landscape Architects)

Ms. Agúndez Reigosa, Marina

- Consulting Development Director at Green Urban Data
- External Consultant in Green Infrastructure, Ecosystem Services and General Improvement of Processes
- Operational Efficiency Projects Coordinator at Grupo Ferrovial
- Head of Production in Gardening and Forestry Services at Grupo Ferrovial
- Forestry Engineer from the Polytechnic University of Madrid
- Specialization in Silvopastoral Farming
- Specialization Course in Rehabilitation of Historic Gardens and Parks, Natural Resources and Conservation

Mr. Álvarez García, David

- Executive Director of Ecoacsa Reserva de Biodiversidad
- Coordinator of the Working Area of Organizations, Strategies and Sustainable Uses of the ISO 331 Committee Biodiversity at Global Level
- International Expert on Biodiversity and Natural Capital for the UN-WCMC, FAO and UN-STATS
- European Leader at Life Institute
- Member of: Advisory Board and Business Ambassador of the EC initiative Business@Biodiversity
- Forestry Engineer from the Polytechnic University of Madrid
- Master MBA Executive by the European Business School of Aragon

Mr. Martínez Gaitán, Óscar

- Agricultural Engineer in Los Árboles Mágicos
- Expert in Agroecosystems and Urban Ecosystems at IUCN
- Agronomical Advisor at CHM Obras e Infraestructuras
- Integrated Pest Management Advisor at Parque Deportivo La Garza
- Agriculture Engineer from the University of Almería
- Specialization in Engineering, Design and Maintenance of Golf Courses and Golf Engineering at the University Miguel Hernandez
- Degree in SME Management and Business Economics from the School of Industrial Organization (EOI)

Mr. Ipas, Alberto

- Managing Partner of Ocio en Verde
- Managing Director of the public spaces of the International Exposition of Zaragoza
- Head of Operations of the Zaragoza Expo Water Park
- Commercial and Marketing Director of the Zaragoza Amusement Park
- CEO at Paintball Jungle Park Punta Cana
- Director of Animation and Operations at Manatí Park
- Executive MBA from Columbus International Business School
- Master MBA in Administration and Management of Renewable Energies by Nebrija University
- Master in Emotional Intelligence and NLP by Euroinnova
- Certified Park Professional International by Indiana University. United States

Mr. Carbonell Martínez, Alejandro

- CEO and Co-Founder of Green Urban Data
- CEO at CeroCeO2
- Co-creator of Effiencity
- Creative at ACM Arquitectura
- Member of the PiP program. Climate-KIC
- Architect in several architectural firms
- Degree in Architecture from the Polytechnic University of Valencia
- Specialization in Building
- Master's Degree in Business Management by CEEI
- Talent MBA at IEBS
- Degree in Management and Organization of Architectural Studios by CTAV

Ms. Velázquez Celorio, María Isabel

- General Director of Public Space Projects of Parks of Mexico
- Coordinator of Sustainable Urban Mobility Projects at Arkom Arquitectura
- General Director of Urban Projects at Consultores en Diseño Urbano del Sureste SCP
- Project Manager at Quesnel Arqs
- Coordinator of Metropolitan Urban Projects at UADY
- Architect by the Autonomous University of Yucatan

05

Structure and Content

Following the practical methodology of Relearning, all the contents of this program have been structured in an organic and natural way. Thus, the key concepts in urban planning and sustainable green infrastructure are given and reiterated throughout the program, resulting in a much more agile learning process for the students. This saves a considerable number of study hours, which can in turn be invested in the large amount of supplementary material provided.

Go deeper into the topics you are most interested in through detailed videos, interactive summaries and complementary readings for each topic"

Module 1. Dynamization of Green Zones

1.1. Planning for public-private partnerships in green spaces
- 1.1.1. 100% public investment in green areas
- 1.1.2. Mixed public-private investment in green spaces
- 1.1.3. Financial sustainability

1.2. The three types of leisure in green spaces
- 1.2.1. The three types of leisure: Static, Concessional and Dynamic
- 1.2.2. Economic impact on green spaces
- 1.2.3. Social impact on green spaces

1.3. Static leisure I: Children's areas
- 1.3.1. Location and environment
- 1.3.2. Accessibility and inclusion
- 1.3.3. Success for comfort
- 1.3.4. Selection of play elements
- 1.3.5. Safety flooring
- 1.3.6. Value of the playground
- 1.3.7. Materials and Environment
- 1.3.8. Applicable regulations according to country
- 1.3.9. Installation of the elements
- 1.3.10. Maintenance of playground equipment
- 1.3.11. Contracting procedure
- 1.3.12. Invoicing and payment

1.4. Static leisure II: Sporting uses
- 1.4.1. Outdoor gymnasiums
  - 1.4.1.1. Security/Safety
  - 1.4.1.2. Types of Apparatus, Modalities
- 1.4.2. Senior or Bio-healthy Parks
  - 1.4.2.1. Components
- 1.4.3. RunningTracks
  - 1.4.3.1. Design Rules
- 1.4.4. Skateboard, pump truck, parkour and similar parks
  - 1.4.4.1. Skate parks users
  - 1.4.4.2. Differences between Pump Truck and BMX
  - 1.4.4.3. Parkour Objectives

1.5. Static leisure III: Signage and Facilities
- 1.5.1. Classical signage
- 1.5.2. Virtual signage
- 1.5.3. Dog areas
  - 1.5.3.1. Design of dog areas
  - 1.5.3.2. Implementation of Improvement Measures
  - 1.5.3.3. Agility Park, Mixed Parks, and Dog Coexistence Zones

1.6. Concessionary Leisure I: Small infrastructures
- 1.6.1. Minor gastronomy and food trucks
- 1.6.2. Rental of bicycles, boats and the like
  - 1.6.2.1. Delimitation, Mobility and Insurance
- 1.6.3. Small bars, kiosks and cafes
  - 1.6.3.1. Logistics Required Services
- 1.6.4. Tourist train
  - 1.6.4.1. Routes, Conditions and Synergies
- 1.6.5. Handicrafts, souvenirs and the like
- 1.6.6. Guided tours Types
- 1.6.7. Other Occasional Leisure Activities

1.7. Concessionary Leisure II: Large infrastructures
- 1.7.1. Success and Failure Cases of Concessions
  - 1.7.1.1. Investments, Periods
  - 1.7.1.2. Failed Concessions
- 1.7.2. Large sports facilities. Synergies
- 1.7.3. Congress Centers, Auditoriums, Museums. Synergies
- 1.7.4. Congress Centers, Auditoriums, Museums. Synergies
- 1.7.5. Large restaurants, Events. Synergies
- 1.7.6. Other large Concessioned Spaces: Equestrian, Theater

1.8. Dynamic Leisure I: Small events
- 1.8.1. Volunteering and dynamization. Requirements
- 1.8.2. Citizen Participation Rental of space
  - 1.8.2.1. Outline of the Citizen Participation Process
  - 1.8.2.2. Small Format Rentals and Assignments

1.8.3. Workshops, school visits
1.8.4. Small actions: Low impact events
1.8.4.1. White nights
1.9. Dynamic leisure II: Major Events
1.9.1. Major concerts or festivals
1.9.1.1. Previous Analysis Final Decision Making
1.9.1.2. List of Conditions
1.9.2. Popular races
1.9.2.1. Pre and Post Organization
1.9.3. Fairs, street markets and similar. Affections in Assemblies and Disassemblies
1.9.4. Other major events
1.9.4.1. Affections to people and facilities
1.10. Management of Green Zones: Security/Safety
1.10.1. International Associations linked to Green Zones
1.10.2. Vandalism: Measurements
1.10.3. Safety in Parks
1.10.3.1. Parallel damage
1.10.3.2. Deliberate thefts
1.10.4. Ecological Management. Measures and Actions

Module 2. Urban Green Infrastructure Strategic Planning

2.1. Urban Green Infrastructure Strategic Planning (IVU)
2.1.1. Urban Green Infrastructure Strategic Planning (IVU)
2.1.2. Scenario Analysis Approach
2.1.3. Key Elements in Planning
2.1.3.1. Green Infrastructure Components
2.1.3.2. Biodiversity
2.1.3.3. Water:
2.1.3.4. Permeability
2.1.3.5. Connectivity
2.1.3.6. Ecological Restoration
2.1.3.7. Adaptation and Resilience
2.1.3.8. Territorial Rebalancing
2.1.3.9. Teamwork
2.2. Methodology for IVU Strategic Planning
2.2.1. Objectives Approach
2.2.2. Main Milestones
2.2.3. Structure. Phases
2.2.3.1. Information Gathering
2.2.3.2. Analysis and Diagnosis
2.2.3.3. Action Plan
2.2.3.4. Implementation
2.2.3.5. Evaluation and Monitoring
2.2.3.6. Communication
2.2.3.7. Participation and Governance
2.2.4. Scope, Validity and Revision
2.2.5. Documentation Generated
2.3. Phases of Urban Green Infrastructure Strategic Planning (IVU): Information Gathering
2.3.1. Study of the information
2.3.2. Collection of Existing Information
2.3.3. Preliminary Studies
2.3.3.1. Contextual Studies
2.3.3.1.1. Legal and Regulatory Framework of each country
2.3.3.1.2. Historical Evolution
2.3.3.1.3. Urban, Peri-urban and Social Environment
2.3.3.1.4. Other contextual studies of interest
2.3.3.2. Current State of the Territory
2.3.3.2.1. Regional and Municipal Scope
2.3.3.2.2. Urban and Periurban Scope
2.3.3.3. Other Preliminary studies of interest
2.3.4. Tools
2.4. Phases of IVU Strategic Planning: Analysis and Diagnosis
2.4.1. Information Management
2.4.2. Priority Setting
2.4.3. Strategic Analysis
2.4.4. Diagnosis
2.4.5. Conclusions

2.5. Phases of Urban Green Infrastructure Strategic Planning (IVU): Action Plan
- 2.5.1. Strategic Objectives and Lines of Action
- 2.5.2. Specific Direct Actions
- 2.5.3. Transversal Actions
- 2.5.4. General Guidelines
- 2.5.5. Ongoing Actions
- 2.5.6. Timeline
- 2.5.7. Final Documents

2.6. Phases of Urban Green Infrastructure Strategic Planning (IVU): Implementation
- 2.6.1. Phases of the Action Plan Implementation Process
- 2.6.2. Feasibility Analysis within the Organization
  - 2.6.2.1. Timeliness of the Proposal
  - 2.6.2.2. Legal Analysis
  - 2.6.2.3. Processing and Schedule
  - 2.6.2.4. Organizational and Competency Analysis
  - 2.6.2.5. Budgetary Analysis. Implementation Costs. Co-financing
  - 2.6.2.6. Estimation of Human, Material and Technological Resources for Implementation
  - 2.6.2.7. Justification
- 2.6.3. Institutional Anchoring and Coordination necessary for the implementation of the plan
- 2.6.4. Impulse

2.7. Monitoring and Evaluation of the Action Plan
- 2.7.1. Follow-up Process
- 2.7.2. Assessment
  - 2.7.2.1. Establishment of Objectives and Priorities
  - 2.7.2.2. Definition of Indicators
  - 2.7.2.3. Organization and Scorecard
  - 2.7.2.4. Corrective Actions
- 2.7.3. Resources

2.8. Actions transversal to planning: Participation and Governance
- 2.8.1. Stakeholders Analysis
- 2.8.2. Action Plan
- 2.8.3. Data Science
- 2.8.4. Implementation and Management
- 2.8.5. Governance and Participation Plan

2.9. Actions transversal to planning: Communication and Awareness
- 2.9.1. Communication
- 2.9.2. Sensitization
- 2.9.3. Generation of Alliances
- 2.9.4. Graphic and Audiovisual Resources Generated

2.10. Case Studies and Best Practices
- 2.10.1. Successful cases in Europe
- 2.10.2. Successful cases in Asia and America
- 2.10.3. Other Approaches to Green Infrastructure Plan Development

Module 3. Monitoring and tracking of indicators and technology applied to the management and planning of sustainable urban infrastructure

3.1. Use of indicators (KPIs) for the monitoring of environmental parameters
- 3.1.1. KPIs as a tool for urban management
- 3.1.2. Public managers
- 3.1.3. Indicators Requirements

3.2. Urban Environmental Quality Management Indicator Systems
- 3.2.1. Indicators for cities
- 3.2.2. SDG (Sustainable Development Goals) indicatorsSustainable Development Goals SDGs
- 3.2.3. Urban Agendas 2030
- 3.2.4. Other Indicator Systems

3.3. The urban environment. Adaptation of Cities
- 3.3.1. Adaptation of Cities
- 3.3.2. Sectors concerned: Tourism, Insurance, Real Estate, Infrastructure
- 3.3.3. Solutions Based on Nature (SBN)

3.4. Indicators and monitoring: categorization, frequency of collection, and quality of indicators
- 3.4.1. Categories of indicators
- 3.4.2. Recurrence of data collection
- 3.4.3. Resolution as a criterion for improving the quality of the indicator

3.5. Technology for city planning: Data collection
- 3.5.1. Data: flour for the cake
- 3.5.2. Data sources for constructing environmental indicators
- 3.5.3. Dashboards for managing using KPIs
- 3.5.4. Technology for citizens as a tool for knowledge and transparency

3.6. Technology for city planning: sustainable cities
- 3.6.1. Cartography (GIS)
- 3.6.2. Big Data
- 3.6.3. Machine Learning
- 3.6.4. Artificial Intelligence
- 3.6.5. Digital Twins

3.7. Smart Cities 2.0: Sustainability at the heart of cities
- 3.7.1. Smart Cities 2.0. from the approach of Sustainability
- 3.7.2. Creation of a Smart City
- 3.7.4. Management Platforms
- 3.7.5. Open Data Portal

3.8. Earth Observation (EO) data for urban planning
- 3.8.1. Monitoring from space
- 3.8.2. Copernicus program
- 3.8.3. International Earth Observation (EO) programs

3.9. Data observatories for the construction of roadmaps to Sustainability
- 3.9.1. Environmental certification standards
- 3.9.2. Standards for the construction of data observatories
- 3.9.3. City monitoring portals
- 3.9.4. Cities. The SDGs

3.10. Future indicators related to resilience and livability
- 3.10.1. Quantification of benefits for the improvement of the emotional and physical health of citizens
- 3.10.2. Measuring the degree of resilience of cities
- 3.10.3. Investment and environment

Module 4. Infrastructure to improve the livability of cities

4.1. Ecosystem Services of Green Infrastructure
- 4.1.1. Regulatory Services
- 4.1.2. Cultural Services
- 4.1.3. Green Infrastructure Management based on Ecosystem Services

4.2. Green Infrastructure and Quality of Life in Cities
- 4.2.1. Decarbonization of cities and health promotion through healthy mobility
- 4.2.2. Mitigation of socioeconomic differences
- 4.2.3. Transversal programs of municipal management and promotion of healthy living habits among citizens

4.3. Biodiversity. Effects on Health
- 4.3.1. Resilient Cities through Biodiversity
- 4.3.2. Biodiversity as a disservice minimizer
- 4.3.3. Urban Green Infrastructures (IVU) indispensable eco-connector

4.4. Sustainable Drainage System. Sealing
- 4.4.1. Soil and water management and their adaptation to meteorological phenomena
- 4.4.2. Soil drainage improvement techniques and processes
- 4.4.3. Soil management success stories

4.5. Façades and green roofs to naturalize the city
- 4.5.1. Eco-connectivity in facades and roofs
- 4.5.2. Management and conservation of green facades and roofs
- 4.5.3. Valorization of the SSEE of green facades and roofs

4.6. Living tree surrounds and industrial areas
- 4.6.1. Living flowerbeds. Design and Conservation
- 4.6.2. Observatory of Nature-Based Solutions (NBS) in industrial areas
- 4.6.3. Results and success stories

4.7. Landscape and Sense of belonging
- 4.7.1. Landscape ecology
- 4.7.2. Landscape in the urban forest and landscaped spaces
- 4.7.3. Bioengineering solutions in the creation of the landscape and the integration of mobility infrastructures

4.8. Landscape restoration and biodiversity. Case Study
- 4.8.1. Current and optimal status
- 4.8.2. Definition of objectives and proposed solutions
- 4.8.3. Planning and involvement of agents as pillars of success

4.9. Involvement of agents for holistic management
- 4.9.1. Coordination between public administrations
- 4.9.2. Education and Citizen Participation in Green Infrastructure (IV)
- 4.9.3. Successful cases in cross-cutting management

4.10. Green infrastructure and health
- 4.10.1. Green Infrastructure (IV) as a therapeutic element
- 4.10.2. The green prescription. Health Promotion and Recovery through Green Infrastructure (IV)
- 4.10.3. Green Infrastructure (IV) and its impact on the health system

Module 5. Infrastructures for urban resilience

5.1. The Heat Island Phenomenon. Effects and Consequences
- 5.1.1. The Heat Island Phenomenon
- 5.1.2. The city and the heat island phenomenon
- 5.1.3. Adaptation to changes

5.2. Energy Efficiency of Urban Green Infrastructure
- 5.2.1. Heat reduction
- 5.2.2. Landscaped facades
- 5.2.3. Green roofs
- 5.2.4. Biological cooling
- 5.2.5. Biophilic buildings

5.3. Functional and ecological connectivity and proximity spaces
- 5.3.1. Opportunity spaces
- 5.3.2. Alignment trees
- 5.3.3. Small squares
- 5.3.4. Urban parks
- 5.3.5. Large periurban parks
- 5.3.6. Ecological corridors and connectivity
- 5.3.7. Greenways
- 5.3.8. Riparian forests
- 5.3.9. Urban-rural and urban-forest interface

5.4. Sink and environmental adaptation effect
- 5.4.1. Carbon sequestration
- 5.4.2. GHG sequestration
- 5.4.3. Runoff reduction
- 5.4.4. Particulate matter retention
- 5.4.5. Noise reduction

5.5. Climatic shelters
- 5.5.1. Shelter areas for extreme temperatures
- 5.5.2. Safety in the event of climatic events
- 5.5.3. Heat waves
- 5.5.4. Torrential rains
- 5.5.5. Thunderstorms
- 5.5.6. Extreme wind

5.6. Ecosystem-based Green Infrastructure Management
- 5.6.1. Ecosystem Economics
- 5.6.2. Ecosystem Connection
- 5.6.3. Spatial and temporal scales
- 5.6.4. Adaptive management

5.7. Ecosystem Services in Public Health
- 5.7.1. Evaluation of ecosystem services in hospital settings
- 5.7.2. Isoprene and monoterpenes and their effects on physical and psychological health
- 5.7.3. Photochemical smog, nitrogen oxides and volatile organic compounds from fossil fuels
  - 5.7.3.1. Absorption processes

5.8. 3/30/300 Rule
- 5.8.1. Proximity green infrastructure
- 5.8.2. Urban planning for a sustainable future
- 5.8.3. Species selection taking into account the migration to higher latitudes of species due to Climate Change (CC)
- 5.8.4. Proximity management, governance, participatory applications
- 5.8.5. Citizen participation in the choice of species
  - 5.8.5.1. Management constraints and efficiency

5.9. Management of the Periurban Environment as an element maximizing the services to the city
- 5.9.1. Urban-rural interface
- 5.9.2. Urban-forest interface
- 5.9.3. Agroecosystems linked to urban sustainability
- 5.9.4. Agro-urban biodiversity
- 5.9.5. Permeability of the city to external ecosystems
- 5.9.6. Opportunity spaces

5.10. Development of Resilient Green Infrastructures
- 5.10.1. Resilient Green Infrastructure Design
- 5.10.2. Prioritization of Green Spaces in New Urbanism
- 5.10.3. City Planning
- 5.10.4. Sustainable and self-sufficient neighborhoods

Module 6. Social infrastructures and experiences of Urban Green Infrastructure (IVU)

6.1. Planning Urban Parks as Coeducational Spaces
- 6.1.1. Schoolyards as Restorative Elements
- 6.1.2. Education and Green Spaces
- 6.1.3. The Schoolyard. Recreation and Nature

6.2. Design of Educational Green Spaces. Technical Aspects
- 6.2.1. Play structures and furniture
- 6.2.2. Enclosure, shading and horticultural production systems
- 6.2.3. Irrigation and vegetation systems

6.3. Methodology for the design of healthy parks
- 6.3.1. Characterization of parks and gardens according to their typology for the contribution to the improvement of people's health
- 6.3.2. Functionality and usability
  - 6.3.2.1. Healthiness and cleanliness
  - 6.3.2.2. Civil works elements in the design of green infrastructure as healthy
- 6.3.3. Activation of public-private collaboration for the management of the design, works and maintenance of healthy parks

6.4. Socio-Cultural Values of Urban Green Infrastructure
- 6.4.1. Planning, design, management and monitoring
  - 6.4.1.1. International use cases
- 6.4.2. Communication and Awareness
- 6.4.3. Community Involvement
  - 6.4.3.1. Process improvement
  - 6.4.3.2. International use cases

6.5. Park Management
- 6.5.1. Quality certifications in Parks
- 6.5.2. Human Resource Management
- 6.5.3. Economic and financial resource management

6.6. Toolkit - Toolbox for qualitative research in parks
- 6.6.1. Public space observation tools
- 6.6.2. Public space qualification tools
- 6.6.3. Systematization and presentation of information

6.7. Toolkit II- Toolbox for Participatory Design in parks
- 6.7.1. Design of participatory design tools
- 6.7.2. Application and systematization of participatory design tools
- 6.7.3. Content program and relationship with the master plan

6.8. Sustainability plans for parks
- 6.8.1. Linkage of the master plan with the sustainability plan
- 6.8.2. Contents and preparation of a financial sustainability plan
- 6.8.3. Financial columns for parks

6.9. Management models. Success Stories
- 6.9.1. Management, governance and innovation
- 6.9.2. Management and public-private partnership models
- 6.9.3. Successful cases of management and partnership models

6.10. Revitalization of the parks and appropriation of the Public Sector
- 6.10.1. Users
- 6.10.2. Strategies of appropriation of the Public
- 6.10.3. Dynamization

Module 7. Technical planning of urban trees

7.1. Diagnosis of the city's trees
- 7.1.1. Current State
- 7.1.2. Inventory
- 7.1.3. Alignment or street trees
- 7.1.4. Park trees
- 7.1.5. Management System

7.2. Elaboration of a Tree Master Plan
- 7.2.1. Target image
- 7.2.2. Management guidelines
- 7.2.3. Implementation and monitoring plans

7.3. Ornamental Tree Assessment
- 7.3.1. Valuation of trees
- 7.3.2. Valuation of palm trees
- 7.3.3. The norms for the valuation of ornamental trees
- 7.3.4. Incorporation of ecosystem services

7.4. Management of trees in urban works and infrastructures
- 7.4.1. From the nursery to the construction site
- 7.4.2. Pruning and felling on site
- 7.4.3. Transplants
- 7.4.4. Plantations

7.5. Diservices caused by urban trees
- 7.5.1. Nuisance fruit
- 7.5.2. Sidewalk breakage due to roots
- 7.5.3. Falling branches
- 7.5.4. Allergenicity
- 7.5.5. Attraction of unwanted fauna

7.6. Benefits and ecosystem services of woodlands
- 7.6.1. Support or provisioning
- 7.6.2. Regulation of pollution, noise, heat island effect and flood protection
- 7.6.3. Cultural, health and leisure

7.7. Topiary pruning or ornamental pruning. Risk of failure
- 7.7.1. Ornamental Pruning
- 7.7.2. The Pruning Process
- 7.7.3. Risk of breakage and its management

7.8. Management guidelines
- 7.8.1. Management plans
- 7.8.2. Adaptation to the SDGs
- 7.8.3. Implementation plans

7.9. Species selection tool
- 7.9.1. Monitoring of species adapted to climate change
- 7.9.2. Design of a selection matrix
- 7.9.3. Design of the calculation tool

7.10. Monitoring and follow-up
- 7.10.1. Creation of information and management scorecard
- 7.10.2. Panel of indicators or KPIs to be monitored
- 7.10.3. Communication and follow-up by the company

Module 8. Sustainable Urban Infrastructure Planning

8.1. Sustainable Development The role of cities and green infrastructure
- 8.1.1. Sustainable development at the global level
- 8.1.2. The role of cities in sustainable development
- 8.1.3. The role of urban green infrastructure in sustainable development

8.2. Sustainable Development Goals (SDGs)
- 8.2.1. Context
- 8.2.2. The 17 Sustainable Development Goals
- 8.2.3. SDG Progress and Monitoring Reports

8.3. SDG 3. Health and Well-being
- 8.3.1. Context
- 8.3.2. Objectives and Goals
- 8.3.3. Relationship to the WHO Healthy Cities Program

8.4. SDG 11. Sustainable Citizens and Communities
- 8.4.1. Context
- 8.4.2. Objectives and Goals
- 8.4.3. Relationship with UN-Habitat, ICLEI programs

8.5. SDG 13. Climate Action
- 8.5.1. Context
- 8.5.2. Objectives and Goals
- 8.5.3. Relationship with the Covenant of Mayors program

8.6. SDG 15. Terrestrial Ecosystem Life
- 8.6.1. Context
- 8.6.2. Objectives and Goals
- 8.6.3. Relationship with UNEP, IUCN and IUCN Programs

8.7. UN-Habitat, the New Urban Agenda (NUA)
- 8.7.1. Sustainability and social, economic and environmental impact
- 8.7.2. Intervention mechanisms and action measures
- 8.7.3. Governance and monitoring indicators

8.8. Networks of cities and municipalities for Sustainability
- 8.8.1. Global Network of Local Governments for Sustainability (ICLEI)
- 8.8.2. Covenant of Mayors for Climate and Sustainable Energy (PACES)
- 8.8.3. Cities Alliance, C40 Cities, United Cities and Local Governments (UCLG)

8.9. Urban Development Trends Related to Sustainability
- 8.9.1. Intelligent Cities
- 8.9.2. 15-Minute Cities
- 8.9.3. Self-sufficient cities
- 8.9.4. Climate-neutral cities
- 8.9.5. Biophilic cities
- 8.9.6. Sponge cities

8.10. International Quality Distinctions in urban sustainability
- 8.10.1. BREEAM
- 8.10.2. LEED
- 8.10.3. WELL Communities

Module 9. Measuring, quantifying, valuing and mapping ecosystem services

9.1. Tools for modeling, identification and valuation of the Ecosystem Services of urban and peri-urban green infrastructure
- 9.1.1. Artificial intelligence linked to the study of Ecosystem Services (ESS)
- 9.1.2. Field data collection
- 9.1.3. Data Processing
- 9.1.4. Modeling of results

9.2. InVEST for the Valuation and Spatial Analysis of Ecosystem Services
- 9.2.1. Habitat Quality
- 9.2.2. Edge Effect of Carbon Storage in the Urban Forest
- 9.2.3. Annual Water Contribution to the system
- 9.2.4. Seasonal Water Supply to the system
- 9.2.5. Nutrient Discharge Rate
- 9.2.6. Sediment Delivery Rate
- 9.2.7. Visitation: Recreation and Tourism

9.3. TESSA for assessing ecosystem services at the scale of an area
- 9.3.1. Coastal protection
- 9.3.2. Cultivated assets
- 9.3.3. Cultural Services
- 9.3.4. Global climate regulation
- 9.3.5. Harvested wild goods
- 9.3.6. Nature-based recreation
- 9.3.7. Pollination
- 9.3.8. Water. Provision, quality and flood control

9.4. SolVES (Social Values for Ecosystem Services) as a tool for mapping ecosystem services
- 9.4.1. Assessing, mapping and quantifying the perceived social values of ecosystem services
- 9.4.2. Integration into GIS
- 9.4.3. Open source developed for QGIS

9.5. ARIES (Artificial Intelligence for Ecosystem Sevices). Artificial Intelligence applied to Geographic Information Systems (GIS) for Ecosystem Services
- 9.5.1. Spatial data and GIS for visualizing input and output maps
- 9.5.2. Equations and lookup tables
- 9.5.3. Probabilistic Models
- 9.5.4. Process-Based Models
- 9.5.5. Agent-based models, which represent ecological and social agents in a dynamic and interdependent way

9.6. i-Tree Suite of software tools for the assessment, diagnosis and inventory of the urban forest and its ESSs
- 9.6.1. i-tree Canopy
- 9.6.2. i-tree ECO
- 9.6.3. i-tree My tree
- 9.6.4. i-tree Landscape
- 9.6.5. I-tree Design

9.7. Modeling using i-Tree Canopy applied to the diagnosis of the Green Infrastructure
- 9.7.1. Monte Carlo Method
- 9.7.2. Study sizing
- 9.7.3. Identification of the studied spaces
- 9.7.4. Pollutants absorbed
- 9.7.5. Carbon sink
- 9.7.6. Runoff avoided

9.8. Modeling using i-Tree Eco applied to urban forest inventory and management
- 9.8.1. Study sizing
- 9.8.2. Complete inventories
- 9.8.3. Inventories by parcels
- 9.8.4. Field data collection
- 9.8.5. Ecosystem study
- 9.8.6. Valuation of Ecosystem Services (SSEE)
- 9.8.7. Future projection

9.9. Green Infrastructure management based on the results obtained through the quantification of Ecosystem Services (SSEE)
- 9.9.1. Ecosystem-based governance
- 9.9.2. Green infrastructure strategy development
- 9.9.3. Modeling of Payment for Ecosystem Services (PES) policies

9.10. GIS Systems and Cartography applied to Ecosystem Services (ESS)
- 9.10.1. Functioning of a GIS
- 9.10.2. Techniques used in geographic information systems
- 9.10.3. Data creation
- 9.10.4. Data Representation
  - 9.10.4.1. Raster
  - 9.10.4.2. Vectorial
- 9.10.5. Raster and vector models
- 9.10.6. Non-spatial data
- 9.10.7. Data capture
- 9.10.8. Conversion of raster-vector data
- 9.10.9. Projections, Coordinate Systems and Reprojection
- 9.10.10. Spatial analysis using GIS
- 9.10.11. Topological model
- 9.10.12. Networks
- 9.10.13. Map overlay
- 9.10.14. Automated mapping
  - 9.10.14.1. Geostatistics
  - 9.10.14.2. Geocoding
- 9.10.15. GIS Software
- 9.10.16. Comparison of GIS software

Module 10. Natural capital in urban infrastructures

10.1. Biodiversity. New global framework
- 10.1.1. Theory of change of the global framework
- 10.1.2. The new global framework for biodiversity. Implications
- 10.1.3. New European regulatory framework

10.2. Natural Capital. New economic and management paradigm
- 10.2.1. Natural Capital. New Paradigm of Economics and Management
- 10.2.2. Natural Capital. Components
- 10.2.3. Ecosystem services

10.3. Natural Capital. Scope
- 10.3.1. Natural capital in urban infrastructures. Pre-existing framework specific to each country
- 10.3.2. Components of natural capital in urban infrastructure
- 10.3.3. Definition of Objectives
- 10.3.4. Identification of Scope

10.4. Natural Capital Impacts and Dependencies
- 10.4.1. Materiality. Concept and variables
- 10.4.2. Impacts on natural capital
- 10.4.3. Dependencies of natural capital

10.5. Bases for measuring Natural Capital
- 10.5.1. Measurement of natural assets
- 10.5.2. Indicators for measuring natural assets. Extension
- 10.5.3. Indicators for measuring natural assets. Condition

10.6. Integration of Natural Capital valuation
- 10.6.1. Measurement of urban ecosystem services
- 10.6.2. Indicators of urban ecosystem services
- 10.6.3. Economic valuation of urban ecosystem services

10.7. Natural Capital Accounting
- 10.7.1. The natural capital accounting framework
- 10.7.2. Natural capital accounting in urban infrastructure
- 10.7.3. Success Stories

10.8. Nature-Based Solutions from a Natural Capital Perspective
- 10.8.1. Nature-Based Solutions. Features
- 10.8.2. Standardization of nature-based solutions
- 10.8.3. SbN from the natural capital prism

10.9. Natural Capital in Urban Infrastructure Management. Integration Models
- 10.9.1. Management models based on ecosystem services
- 10.9.2. Financing models based on Natural Capital
- 10.9.3. Natural Capital. Management implications

10.10. Opportunities based on Natural Capital
- 10.10.1. Measuring economic impact
- 10.10.2. Business models based on natural capital
- 10.10.3. Economic impact of business models

06

Methodology

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.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

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.

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. 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 professional reality is taken into account.

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

The case method is the most widely used learning system in the best faculties in the world. 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 that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

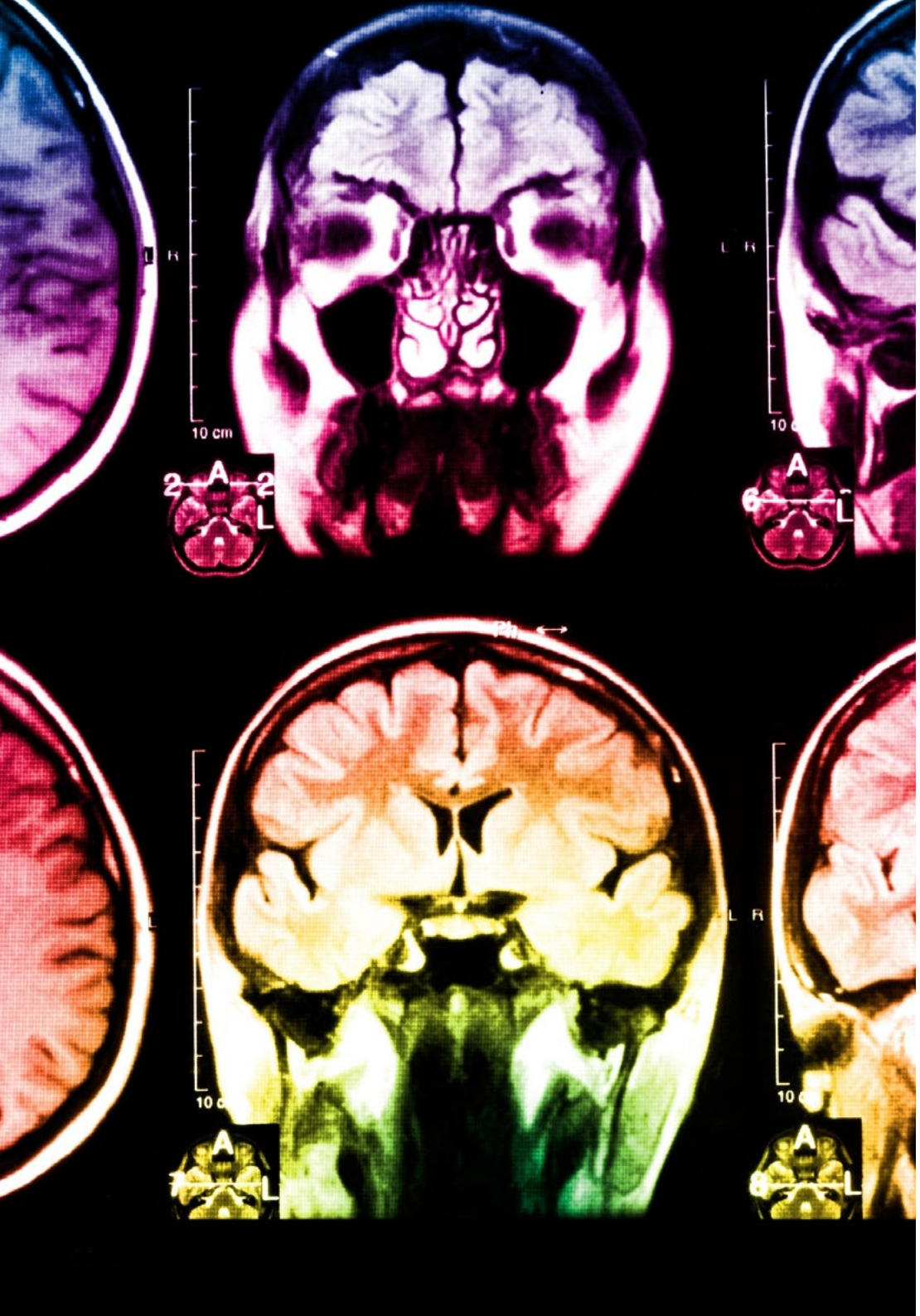
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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

In 2019, we obtained the best learning results of all online universities in the world.

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 university is the only one in the world authorized to employ 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.



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. This methodology has 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, and financial markets and 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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.

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.

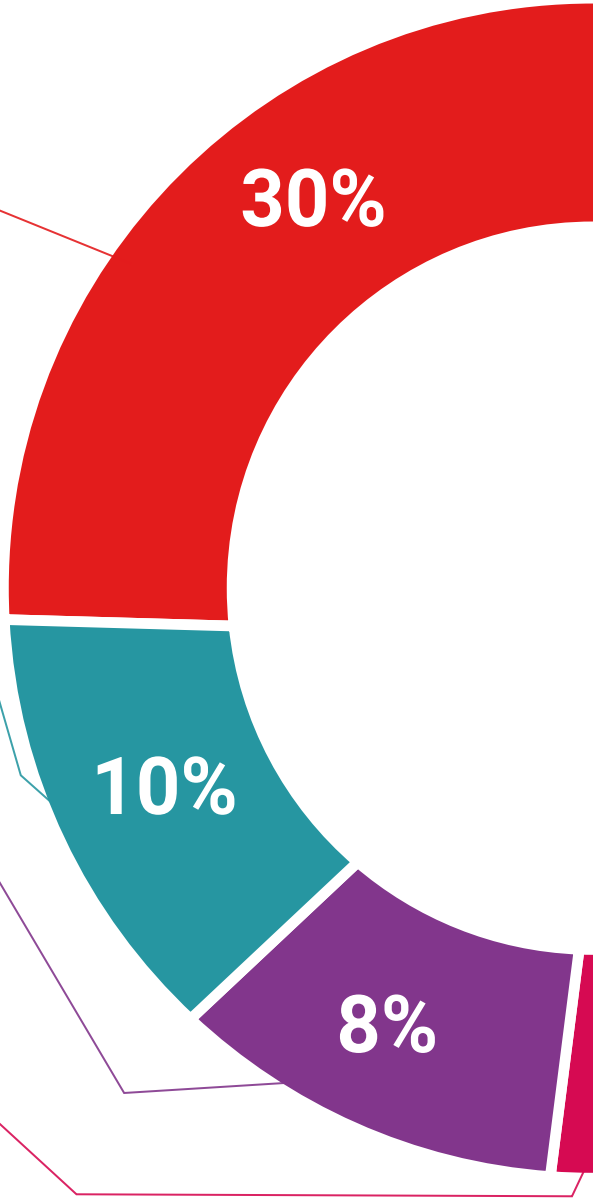
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

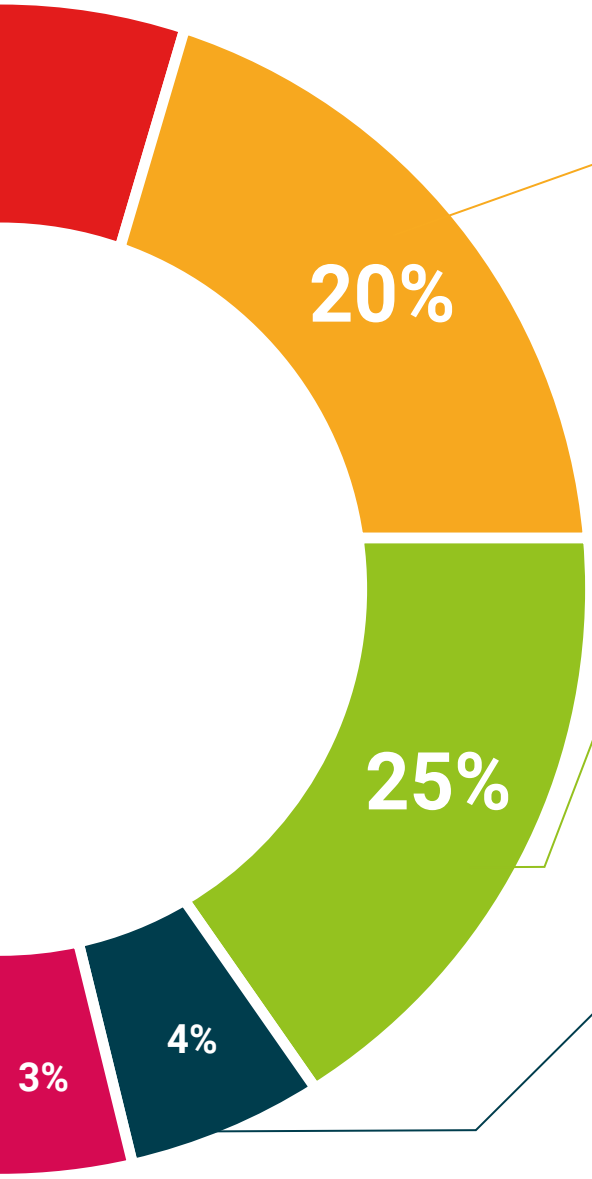
Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

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.





Case Studies

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 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.

07

Certificate

The Professional Master's Degree in Design of Sustainable Green Infrastructures guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This **Professional Master's Degree in Design of Sustainable Green Infrastructures** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Design of Sustainable Green Infrastructures**

Official Nº of Hours: **1,500 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Design of Sustainable Green Infrastructures

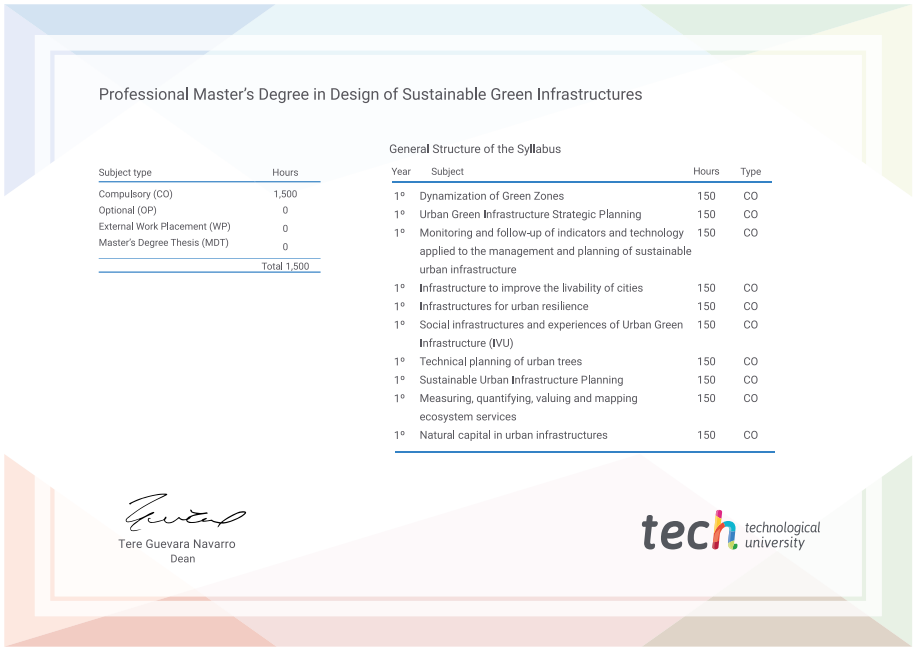
This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWOR023S techtitute.com/certificates


Professional Master's Degree in Design of Sustainable Green Infrastructures

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Dynamization of Green Zones	150	CO
1º	Urban Green Infrastructure Strategic Planning	150	CO
1º	Monitoring and follow-up of indicators and technology applied to the management and planning of sustainable urban infrastructure	150	CO
1º	Infrastructure to improve the livability of cities	150	CO
1º	Infrastructures for urban resilience	150	CO
1º	Social infrastructures and experiences of Urban Green Infrastructure (IVU)	150	CO
1º	Technical planning of urban trees	150	CO
1º	Sustainable Urban Infrastructure Planning	150	CO
1º	Measuring, quantifying, valuing and mapping ecosystem services	150	CO
1º	Natural capital in urban infrastructures	150	CO

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*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.

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Professional Master's Degree

Design of Sustainable Green Infrastructures

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Design of Sustainable Green Infrastructures

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