Postgraduate Certificate

Constructive Elements in Landscape Architecture

tech global university

tech global university

Postgraduate Certificate
Constructive Elements in Landscape Architecture

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Global University**
- Credits: **6 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/engineering/postgraduate-certificate/constructive-elements-landscape-architecture**

Index

01

Introduction

Among the most fascinating projects in the creation of spaces is Landscape Architecture. Being able to combine the physical and structural elements offered by nature itself with the innovation of artificial resources opens up a world of creative possibilities. However, this is a very complex field due to the imperative need to know the characteristics of these resources in detail, in order to create attractive environments that guarantee their functionality, aesthetics and sustainability. To this end, the professional can take advantage of this program, focused on the developments of the constructive elements of Landscape Architecture. This is a 100% online program that delves into the latest advances in materials, infrastructures, furnishings and construction elements through 180 hours of the best multidisciplinary content.

Would you like to keep up to date with the latest news related to construction materials and architectural trends in their use? Don't wait any longer and enroll right now in this Postgraduate Certificate"

The history of landscape design spans centuries and centuries of impressive creations. Arab gardens (such as those of the Generalife Palace in the Alhambra in Granada, Spain), the Albert Kahn Museum in France or Central Park itself in New York, are examples of the diversity offered by this branch of Architecture, as well as of the genius that comes from combining the resources offered by nature with artificial elements and human knowledge. Designing and planning projects of this type becomes, therefore, a real challenge for specialists. However, it also implies a specialized knowledge that allows them to obtain results from this combination that complement the functionality of the space with aesthetics and sustainability.

For this reason, this Postgraduate Certificate in Constructive Elements in Landscape Architecture is a response to the need to combine, in a single program, the information necessary to master this branch. It is a complete, dynamic, multidisciplinary and innovative program that delves into the developments of the materials, infrastructure, constructive elements and furnishings of today's landscaping. Therefore, the graduate will be able to delve into aspects such as loads and reactions, themed structures or the trends that are currently having the best results.

All this through 180 hours of the best theoretical, practical and additional content, the latter presented in the form of different resources: research articles, complementary readings, news, dynamic summaries, diagrams, videos, interviews and much more! Additionally, its convenient 100% online format brings flexibility to the academic experience, allowing you to access the program from wherever and whenever you want, with the only requirement of having a device with an Internet connection. In this way, the graduate will be able to work on increasing their knowledge, following the modern guidelines of Landscape Architecture and implementing the latest developments in their practice.

This **Postgraduate Certificate in Constructive Elements in Landscape Architecture** contains the most complete and up-to-date program on the market. The most important features include:

- The development of practical cases presented by experts in Engineering and Architecture
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out 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

A program in which you will find the keys to combine Architecture and nature with the art of creating fascinating spaces"

Frederick Law Olmsted, Andre Le Notre, Martha Schwartz.... They are the best landscape architects in the world. Would you like your name on this list? Bet on a program that will help you achieve it"

You will master the consolidation of soils through the best drainage and containment techniques based on new developments of the constructive elements of the landscape.

Would you like to implement soil, turf and unconventional materials in your projects? Get to know the innovations in this regard with this program and surprise in your next planning.

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

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

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

02

Objectives

Landscape Architecture requires specialized knowledge, which is achieved through a thorough study of the different areas that compose it. Therefore, the goal of this program is to provide graduates with all the information and resources they need to master the constructive elements in just 180 hours of 100% online academic experience. Additionally, it aims to serve as an asset to improve and adapt their professional profile to the new trends in this science.

Whatever your goals are, in this Postgraduate Certificate you will find the necessary resources to direct your way to success and exceed them"

General Objectives

- Understand the basic principles of climate and its influence on the design and maintenance of landscape spaces
- Study the characteristics and properties of soil (edaphology) and its importance for plant development in the landscape
- Become familiar with the fundamental concepts of plant biology and botany, including species identification and adaptability
- Analyze the interaction between climate, soil and plants in the creation and management of sustainable landscapes
- Learn how to select and use appropriate plants for different climatic conditions and soil types

Specific Objectives

- Define materials used in the construction of landscape elements, such as pavements, walls, urban furniture, among others
- Integrate the properties, characteristics and applications of materials commonly used in Landscape Architecture
- Delve into the principles of design and construction of landscape infrastructure, such as drainage, irrigation and lighting systems
- Develop sustainable design strategies that incorporate recycled, low maintenance and low environmental impact materials

If you are also interested in adding street furniture design to your knowledge, in this program you will find the best tips to create in an innovative and revolutionary way"

03

Course Management

The faculty of this Postgraduate Certificate in Constructive Elements in Landscape Architecture is composed, as it could not be otherwise, by professionals of the highest level in this field A teaching team that has worked for years on the planning, design and management of landscape projects, so they know in detail the essential guidelines to execute them effectively and efficiently, as well as the strategies to take into account according to the context in which the work is to be carried out.

The teaching team has carefully selected additional resources including case studies so that you can work on perfecting your professional skills and abilities"

Management

Dr. Schiavo, Fiorella

- Landscape Architect & Digital Landscape Leader at OVE ARUP & PARTNERS
- BIM Implementation Consultant at LAND Italia
- PhD in Geography from the University of Barcelona
- Master's Degree in Landscape Architecture by the Polytechnic University of Catalonia
- Master's Degree in Territorial Planning and Environmental Management by the University of Barcelona
- Master's Degree in BIM Programming from the University Isabel II
- Diploma in Architecture

Professors

Mr. Arroyo Parras, Juan Gabriel

- Earth Observation Expert at INNECO
- Technical Surveying Engineer specialized in Satellite Geodesy
- GNSS technical consultant at ESSP SAS
- R+D+i project engineer at the Technological Center of Components.
- Master's Degree in Satellite Geodesy and Geophysics applied to Engineering and Geology by the University of Jaén
- Degree in Technical Engineering in Topography from the University of Jaén
- University Expert in Sustainable Energy Solutions by the International University of Andalucía

Professors

Mr. Camargo Casali, Daniel

- CEO and founder of D + D Solutions
- Architect in the development team of the Master Plan of Contents of the EXPO ANTALYA
- Designer and collaborator of ABBSOLUTE GROUP
- Architect Designer of Martyr's Memorial Project in Amman, Jordan
- Architect in the elaboration of the Master Plan for the Universal Exposition of Seville in 1992
- Graduate in Architecture from the University of Buenos Aires

Mr. Guerra Macho, Joaquín

- CEO and founder of IKONOS Engineering
- Senior Consultant of freelance Industrial Engineering projects
- Technical Director Manager of ASTER Consultores
- Industrial Engineering graduate from the E.S.I.I. of Seville

Ms. González Albarracín, Rosa

- Founding partner of the company Arquitectura Paisajista y Tematización SL
- Sculptor-Designer at GreenerLand
- Designer-decorator for different companies
- Freelance designer for the Museum of Villayón
- Restorer at the Museum of Fine Arts of Oviedo
- Graduate in Fine Arts from the University of Seville

04

Structure and Content

The teaching team has worked rigorously and exhaustively to create the 180 hours of content that make up this Postgraduate Certificate. In this way, the graduate who has access to the program will find in it theoretical, practical and additional resources based on the developments of the Constructive Elements in Landscape Architecture, which can be downloaded to any device with Internet connection. Additionally, you will benefit from the *Relearning*methodology, thanks to which you will attend a natural and progressive learning, without the need to invest extra hours in memorizing.

The program includes a module focused on drainage infrastructure, so that you can get up to date on the systems that are dominating landscape permeability"

Module 1. Materials, infrastructure, construction elements and furnishings

1.1. Properties of Construction Materials
- 1.1.1. Material Properties
- 1.1.2. Basic Principles of Force Mechanics
- 1.1.3. Loads and Reactions
- 1.1.4. Beams and Columns

1.2. Construction Materials. Uses, Types and Application Techniques of each of the Following Materials to Different Construction Solutions
- 1.2.1. Stone
- 1.2.2. Concrete
- 1.2.3. Brick
- 1.2.4. Metals
- 1.2.5. Wood
- 1.2.6. Glass
- 1.2.7. Polymers (Plastics and Rubbers)
- 1.2.8. Soil, Turf and Non-conventional Materials
- 1.2.9. Thixotropic Mortars

1.3. Constructive Elements of the Landscape
- 1.3.1. Consolidated Soils, Earthworks, Slopes and Backfills. Drainages
- 1.3.2. Containment Structures
  - 1.3.2.1. Stairs, Ramps, Retaining Walls, Ha-Ha, Reinforced floors
  - 1.3.2.2. Typologies of Each Element, Uses, Force Diagrams
  - 1.3.2.3. Materials Used for their Construction
  - 1.3.2.4. Foundations and Structures
- 1.3.3. Pavements
  - 1.3.3.1. Types of Pavements. Hard, Flexible, Porous
  - 1.3.3.2. Foundations
  - 1.3.3.3. Border Elements, Curbs, Steels
  - 1.3.3.4. Pavement Design. Color, Textures
- 1.3.4. Pergolas, Balustrades, Metallic Structures, Profiles, Plastic Elements
  - 1.3.4.1. Materials, Constructive Solutions and Problems Associated with the Material
- 1.3.5. Root Protection Systems in Urban Environments by Means of

1.3.6. Material Connections, Mechanical, Adhesive and Metallic Fasteners Advantages and Disadvantages
1.3.7. Protections and Finishes. Maintenance

1.4. Structures and Themed Elements
1.4.1. Mortars with TXT Resin for Recreation of Themed Spaces
1.4.2. Types of Material
1.4.3. Structures Depending on the Location
1.4.4. Friezes, Retaining Walls, Artificial Rocks, Theming of Ashlars
1.4.5. Sand Pools

1.5. Water Elements
1.5.1. Elements and Aquatic Gardens. Fountains, Canals, Ponds and Lagoons. Typologies. Rigid, Flexible, Irregular, Formal Ponds. Scale and Location
1.5.2. Design. Site Conditions, Location, Drainage and Infrastructure, Water Table, Basic Depth of Force Mechanics. Types of Waterproofing
1.5.3. Distribution of Aquatic Species as a Function of Depth and Design of the Same
1.5.4. Benefits of Ponds and Water in the Garden
1.5.5. Filling through Drainage and Water Recirculation

1.6. Landscape Furnishings
1.6.1. Street Furniture Design
1.6.1.1. Benches, Garbage Cans, Platforms, Planters, Milestones
1.6.1.2. Construction Details
1.6.2. Ephemeral Structures in the Landscape
1.6.3. Temporary Scenographies
1.6.4. Mirrors

1.7. Design of Modular and Mobile Structures. Planters, Ponds, Rails
1.7.1. Modular Planters
1.7.2. Mobile Ponds
1.7.3. Modular Rails

1.8. Drainage Infrastructure
1.8.1. Conventional Drains. Types, Designs and Materials
1.8.2. Sustainable Urban Drainage Systems. The Permeability of Cities
1.8.3. Atlantis System
1.8.4. Stockholm System
1.8.5. Rain Gardens

1.9. Irrigation Infrastructure
1.9.1. Design of Irrigation Projects
1.9.2. Hydrozones
1.9.3. Connection Point
1.9.4. Piping Distribution and Calculation
1.9.5. Types of Emitters
1.9.6. Low Water Consumption Emitters
1.9.7. Programmers. Types Depending on the Size of the Project
1.9.8. Pumping

1.10. Electricity Infrastructure
1.10.1. Design of a Garden Lighting Installation
1.10.2. The Approved Project
1.10.3. Protection Elements
1.10.4. Conduits and Connection Elements
1.10.5. Comparison of Consumption of Different Types of Emitters
1.10.6. Selection of Lighting Fixtures, Street Lamps, Poles, Spotlights, in keeping with the Style of the Space and its Use within it
1.10.7. Reduction of Light Pollution

Thanks to the course of this program you will be able to guarantee an ideal fundamental composition for each project, according to the style and use of the space"

05

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

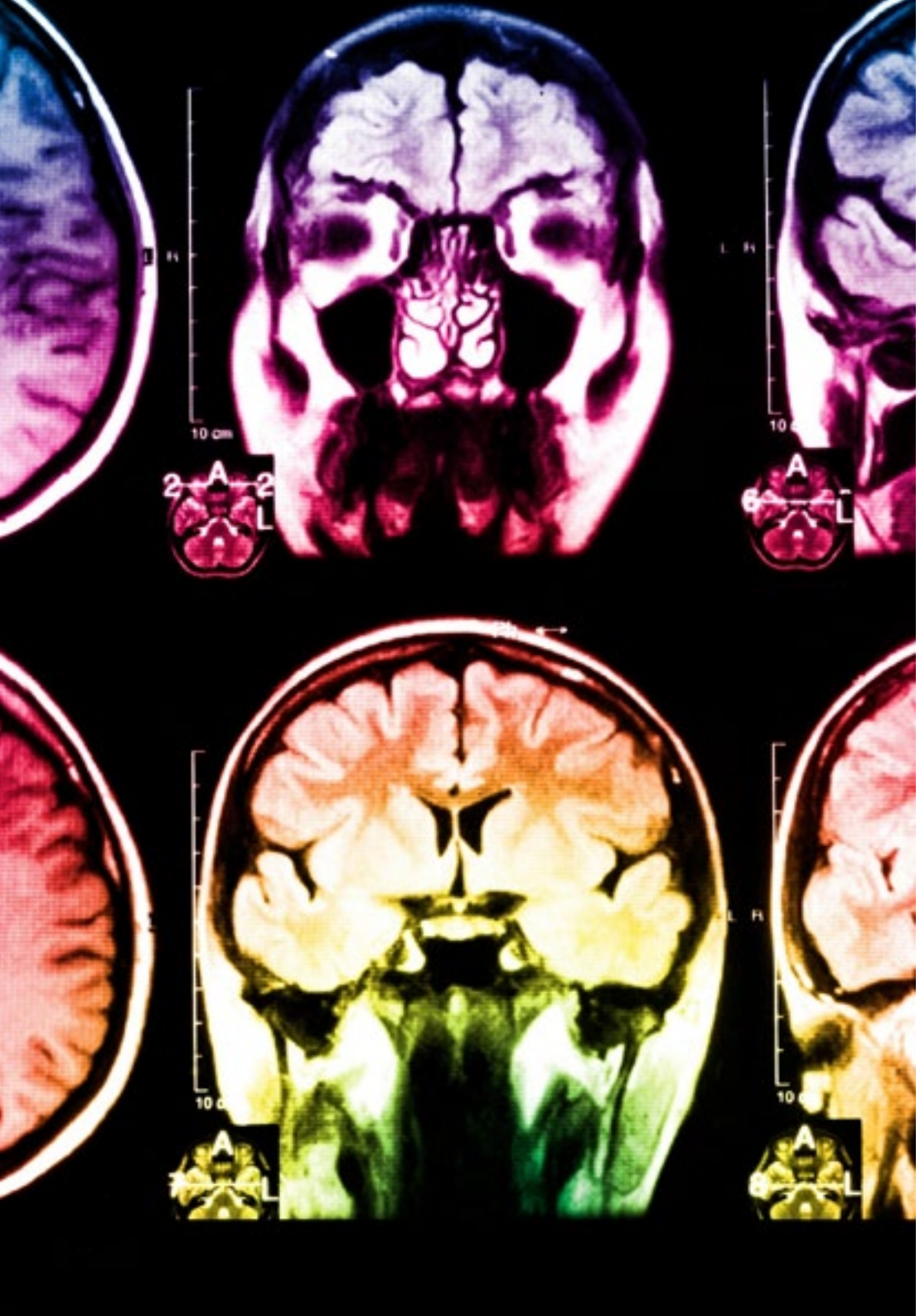
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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.

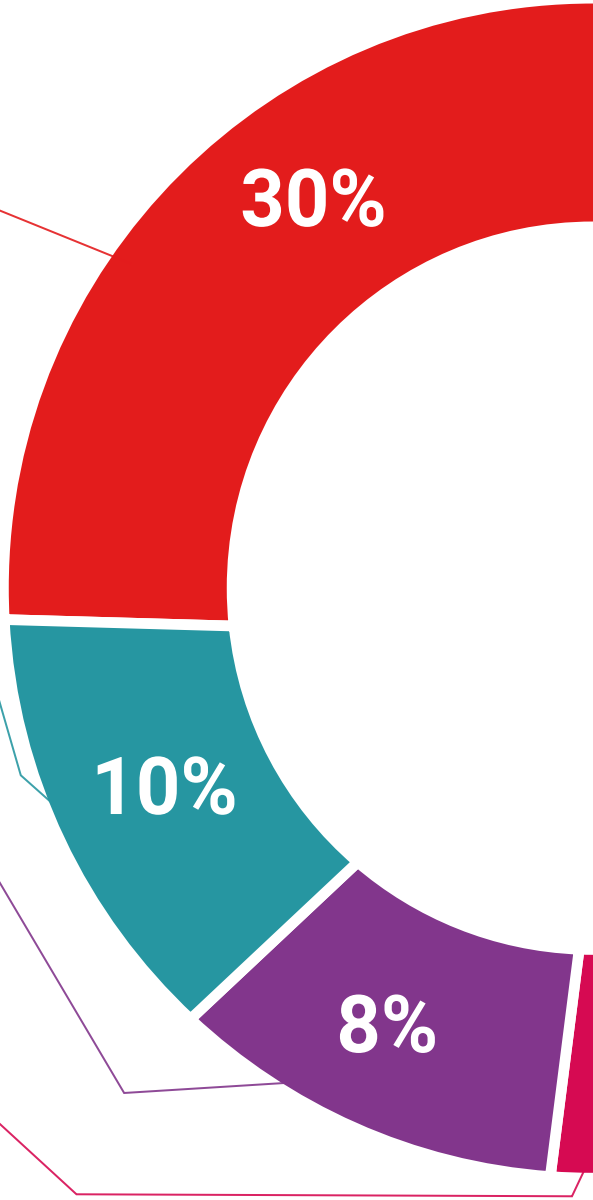
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

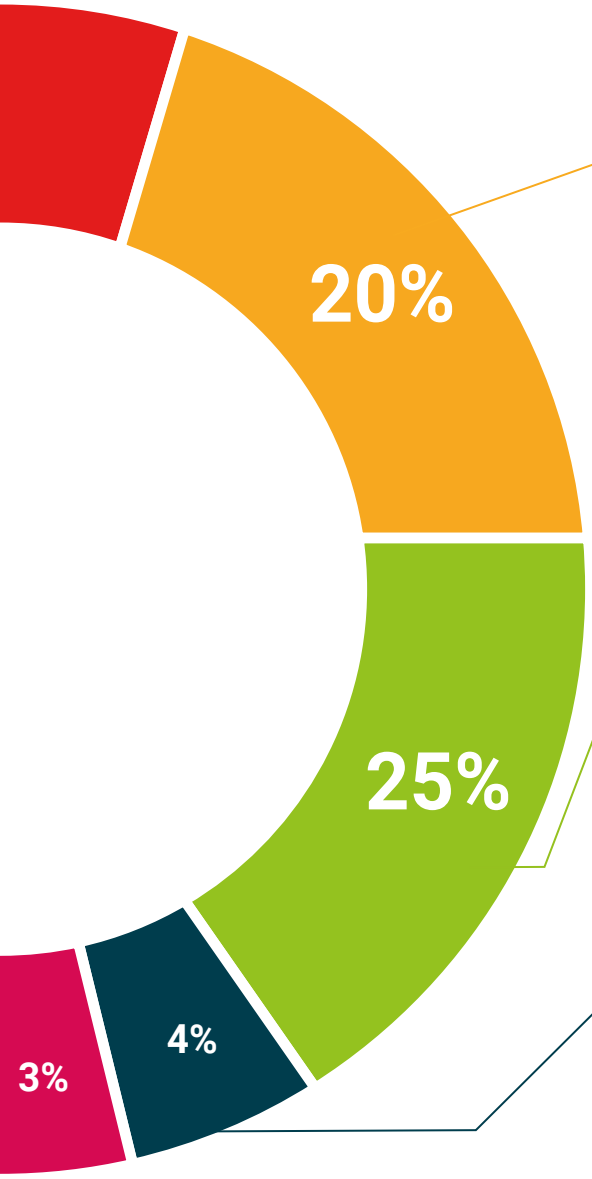
Practising Skills and Abilities

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.

06

Certificate

The Postgraduate Certificate in Constructive Elements in Landscape Architecture guarantees, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Certificate in Constructive Elements in Landscape Architecture** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Constructive Elements in Landscape Architecture**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Constructive Elements in Landscape Architecture

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

tech global university

Postgraduate Certificate
Constructive Elements in Landscape Architecture

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Global University**
- Credits: **6 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Certificate

Constructive Elements in Landscape Architecture

tech global university