

# Postgraduate Certificate Construction of Buildings in Civil Engineering



## Postgraduate Certificate Construction of Buildings in Civil Engineering

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

Website: [www.techtute.com/us/engineering/postgraduate-certificate/construction-buildings-civil-engineering](http://www.techtute.com/us/engineering/postgraduate-certificate/construction-buildings-civil-engineering)

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# 01

# Introduction

Construction of Buildings in Civil Engineering is in a context of constant evolution due to increasing demands and regulations. In this scenario, it is necessary for professionals to have a solid and up-to-date instruction on the subject. In this sense, this program offers a high-quality teaching proposal, which responds to the current needs of the engineer in terms of theoretical and practical knowledge. In this way, students will learn in depth about solutions for load-bearing walls, enclosures and finishes, among others. In addition, it stands out for being developed in a 100% online format, which allows the student flexibility in terms of schedules and location. Likewise, the Relearning methodology is used to promote the active participation of the student, favoring the retention and application of the acquired knowledge.



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*Enroll and learn more about previous operations, solutions for load-bearing walls, structures, building installations, enclosures and finishes, facades and building maintenance completely online”*

Construction of Buildings in Civil Engineering is a field that is in constant evolution and growth. In fact, the construction sector is expected to increase its value exponentially in the coming years, which implies a high annual sustained growth. In this context, it is becoming increasingly important for professionals working in this sector to have a solid and avant-garde education, which allows them to develop high-quality projects in accordance with current regulations and requirements.

It is in this scenario that the Postgraduate Certificate in Construction of Buildings in Civil Engineering is presented as a highly valuable option for engineers seeking to broaden and strengthen their knowledge in this field. The program addresses the fundamental topics that every engineer must know in order to carry out construction projects, from preliminary operations to building maintenance, including solutions for load-bearing walls, structures, building installations, enclosures and finishes, and facades. In this way, students will be able to acquire a comprehensive and complete vision of the entire building process and be prepared to face the challenges of today's market.

It is important to highlight that the program is developed in a 100% online format, which implies important advantages for the student. On the one hand, students are given flexibility in terms of schedules and location, which allows them to study and advance in their education without having to adjust to a rigid schedule or having to move to a specific physical location. On the other hand, the program uses the Relearning methodology, which focuses on active and participatory learning, and encourages reflection and critical analysis of the contents, as well as the retention and application of the knowledge acquired.

This **Postgraduate Certificate in Construction of Buildings in Civil Engineering** 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 Civil Engineering
- ◆ 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 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



*Enjoy the flexibility offered by the 100% online theoretical part, which will allow you to study at your own schedule and from anywhere in the world"*

“

*You will be able to access the Virtual Campus 24 hours a day, 7 days a week, and stay at the forefront of your industry”*

*Delve into the previous operations, construction facilities, enclosures and finishes, facades and maintenance of buildings, with the help of experts in each of these areas.*

*You will have at your fingertips a virtual library full of first class contents, with which you will be able to broaden your knowledge and gain a deeper understanding of those topics that interest you the most.*

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

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02

# Objectives

This program is presented as a unique opportunity for graduates to acquire the necessary skills in the management of construction projects, from the previous operations to the maintenance of buildings, which will allow them to develop technical and practical skills and be prepared to face the challenges of the current market. Upon completion of this course, students will be in a privileged position to achieve their professional goals and stand out in the job market. In addition, thanks to its 100% online format and its Relearning methodology, students will be able to study with flexibility, which will allow them to adapt their education to their needs and time availability.





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*Upon completion of the Postgraduate Certificate, you will be in a unique position to achieve your career goals in today's Civil Engineering building market”*



## General Objectives

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- ◆ Learn in an autonomous way new knowledge and techniques suitable for Civil Engineering
- ◆ Know in detail the nature, characteristics and performance of new construction materials that have been investigated in recent years
- ◆ Understand and use the language of engineering, as well as the terminology of Civil Engineering
- ◆ Delve in a scientific and technical way in the exercise of the profession of Technical Engineer of Public Works with knowledge of the functions of consultancy, analysis, design, calculation, project, construction, maintenance, conservation and operation





### Specific Objectives

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- ◆ Qualify for the application of the necessary legislation during the exercise of the profession of Technical Engineer of Public Works
- ◆ Understand the design, calculation, construction and maintenance of building works in terms of structure, finishes, installations and equipment

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*Don't waste any more time and enroll now in TECH's Postgraduate Certificate in Construction of Buildings in Civil Engineering to stand out in your professional career in this constantly evolving sector”*

# 03

## Structure and Content

The Postgraduate Certificate in Construction of Buildings in Civil Engineering is composed of a syllabus that covers everything from preliminary operations to shallow and deep foundations. Therefore, throughout this program, the student will be immersed in the most exhaustive knowledge of retaining walls and basement walls and will delve into the solutions of load-bearing walls, such as masonry, concrete, rationalized and prefabricated walls. All this under a 100% online format that offers the necessary flexibility so that the graduate can adapt the study to their needs and time availability.





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*Get qualified with the Relearning methodology used in the program to encourage active and participative learning, which will allow you to reflect and critically analyze the contents presented”*

## Module 1. Construction

- 1.1. Introduction
  - 1.1.1. Introduction to Construction
  - 1.1.2. Concept and Importance
  - 1.1.3. Functions and Parts of the Building
  - 1.1.4. Technical Regulations
- 1.2. Previous Operations
  - 1.2.1. Superficial Foundations
  - 1.2.2. Deep foundations
  - 1.2.3. Retaining Walls
  - 1.2.4. Basement Walls
- 1.3. Load-Bearing Wall Solutions
  - 1.3.1. Masonry
  - 1.3.2. Concrete
  - 1.3.3. Rationalized Solutions
  - 1.3.4. Prefabricated Solutions
- 1.4. Structures
  - 1.4.1. Slab Structures
  - 1.4.2. Static Structural Systems
  - 1.4.3. One-Way Slabs
  - 1.4.4. Waffle Slabs
- 1.5. Construction Installations I
  - 1.5.1. Plumbing
  - 1.5.2. Water Supply
  - 1.5.3. Sanitation
  - 1.5.4. Drainage
- 1.6. Construction Installations II
  - 1.6.1. Electrical Installations
  - 1.6.2. Heating





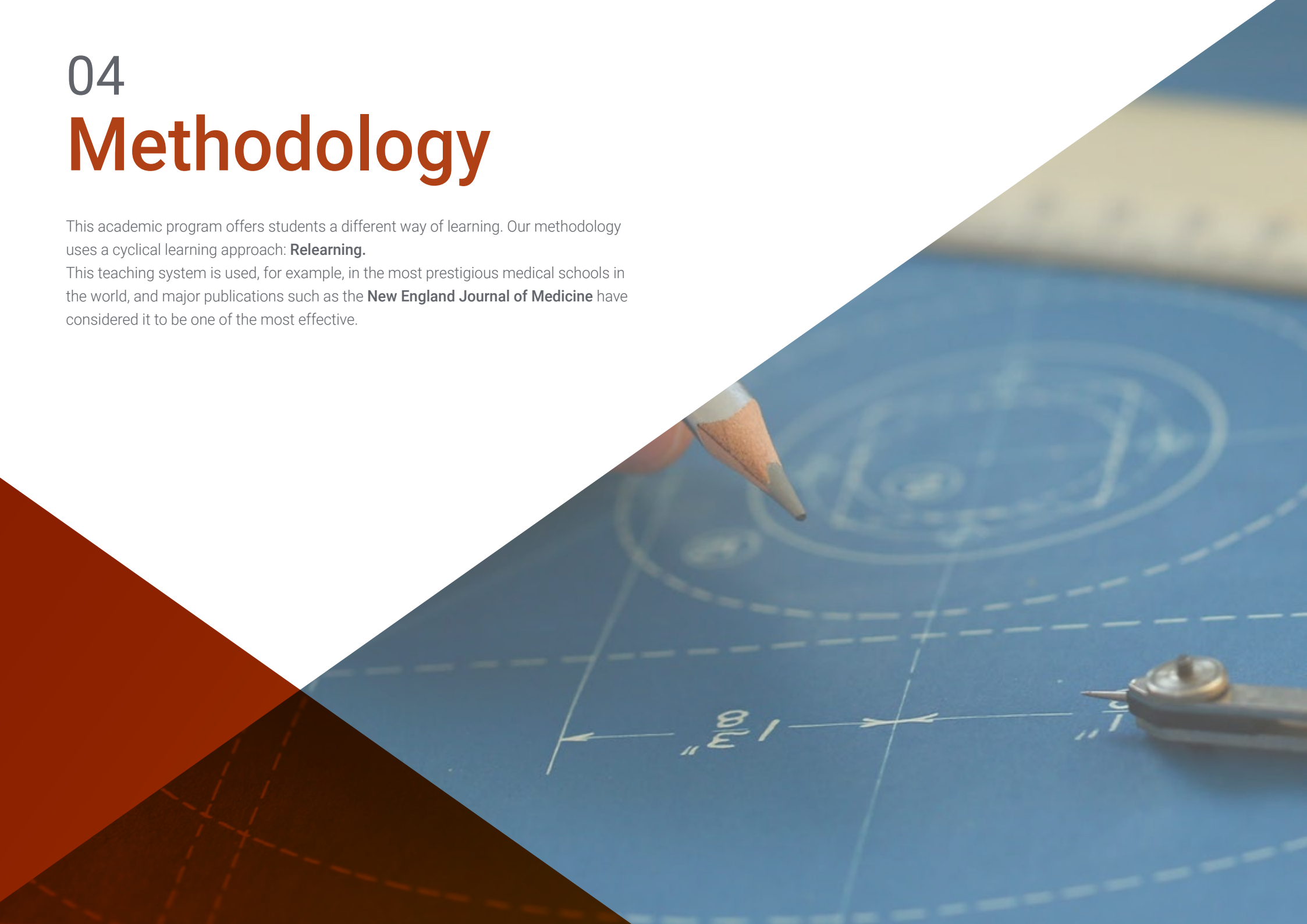
- 1.7. Enclosures and Finishes I
  - 1.7.1. Introduction
  - 1.7.2. Physical Protection of the Building
  - 1.7.3. Energy Efficiency
  - 1.7.4. Noise Protection
  - 1.7.5. Moisture Protection
- 1.8. Enclosures and Finishes II
  - 1.8.1. Flat Roofs
  - 1.8.2. Sloping Roofs
  - 1.8.3. Vertical Enclosures
  - 1.8.4. Interior Partitions
  - 1.8.5. Partitions, Carpentry, Glazing and Fendering
  - 1.8.6. Coatings
- 1.9. Facades
  - 1.9.1. Ceramics
  - 1.9.2. Concrete Blocks
  - 1.9.3. Panels
  - 1.9.4. Curtain Walls
  - 1.9.5. Modular Construction
- 1.10. Building Maintenance
  - 1.10.1. Building Maintenance Criteria and Concepts
  - 1.10.2. Building Maintenance Classifications
  - 1.10.3. Building Maintenance Costs
  - 1.10.4. Equipment Maintenance and Usage Costs
  - 1.10.5. Advantages of Building Maintenance

04

# 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.







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*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.

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*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.



05

# Certificate

The Postgraduate Certificate in Construction of Buildings in Civil Engineering guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.







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*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 Construction of Buildings in Civil Engineering** 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 Construction of Buildings in Civil Engineering**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



## Postgraduate Certificate Construction of Buildings in Civil Engineering

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

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