

# Postgraduate Certificate Energy Saving in Facilities



## Postgraduate Certificate Energy Saving in Facilities

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

Website: [www.techtute.com/us/engineering/postgraduate-certificate/energy-saving-facilities](http://www.techtute.com/us/engineering/postgraduate-certificate/energy-saving-facilities)

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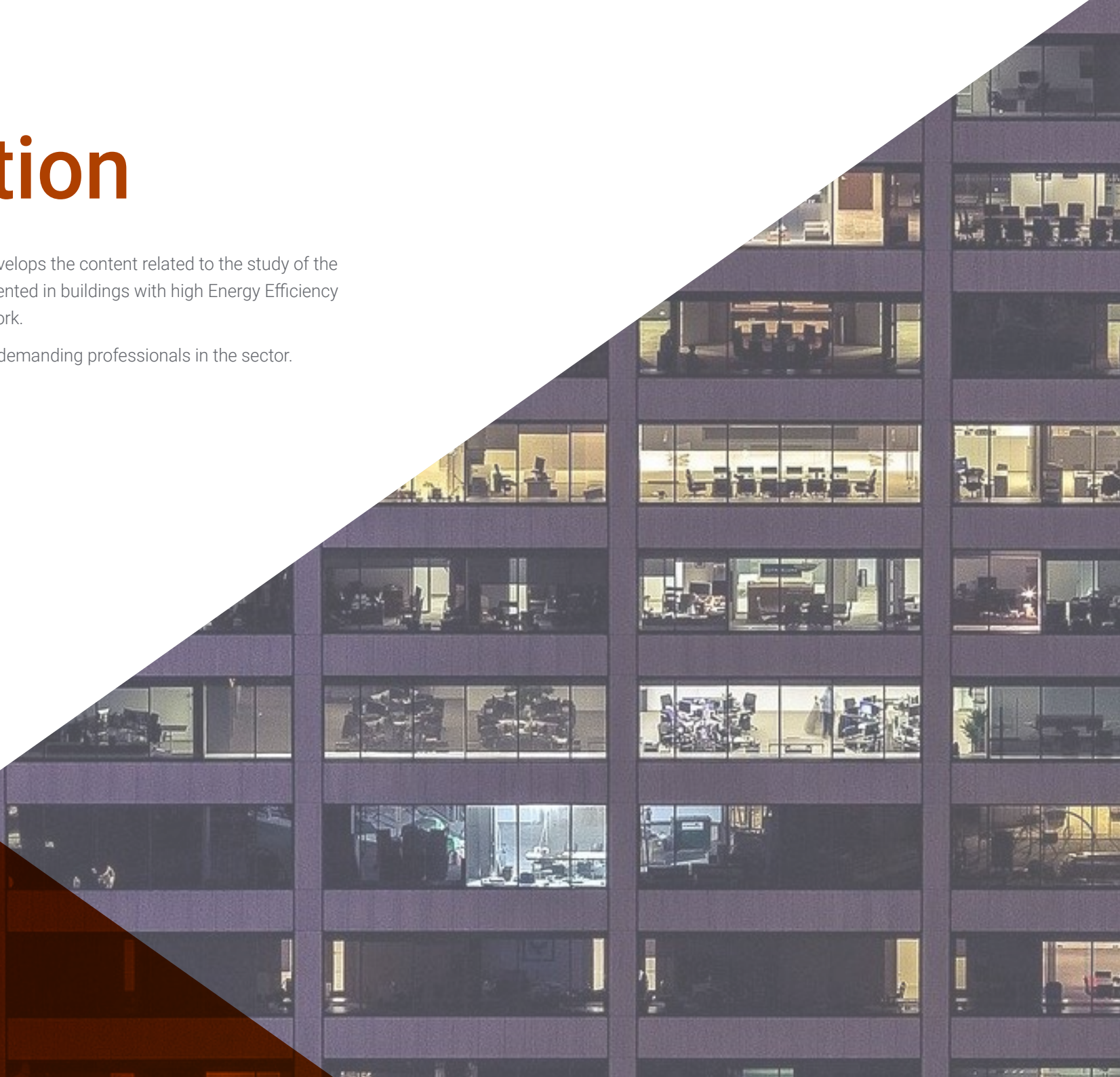
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01

# Introduction

This complete Postgraduate Certificate develops the content related to the study of the most important installations to be implemented in buildings with high Energy Efficiency according to the technical criteria of the work.

A high quality proposal aimed at the most demanding professionals in the sector.





*Acquire the most advanced and updated knowledge in the field of Energy Saving in Facilities with a Postgraduate Certificate of high qualification and educational impact"*

The key concepts of the analysis of air conditioning equipment and aerothermal heat pumps, ventilation installations with heat recovery, optimization in the selection of boilers and pumps, new air conditioning alternatives such as installations with radiant floors and radiant ceilings, fan coils and trombe walls will be presented. In addition, free cooling installations by outside air (Free-Cooling) will be analyzed, as well as lighting and transport installations with efficient equipment.

In addition, solar thermal and solar photovoltaic production facilities will be analyzed, analyzing their viability and contribution according to the technical requirements requested.

We will end with a presentation of the different consumption control tools, highlighting home automation and the Best Management System (BMS) of application in Efficient Buildings.



*Join the elite, with this highly effective training training and open new paths to help you advance in your professional progress"*

This **Postgraduate Certificate in Energy Saving in Facilities** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The latest technology in online teaching software
- ♦ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ♦ Practical cases presented by practicing experts
- ♦ State-of-the-art interactive video systems
- ♦ Teaching supported by telepractice
- ♦ Continuous updating and recycling systems
- ♦ Autonomous learning: full compatibility with other occupations
- ♦ Practical exercises for self-assessment and learning verification
- ♦ Support groups and educational synergies: questions to the expert, debate and knowledge forums
- ♦ Communication with the teacher and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ Supplementary documentation databases that are permanently available, even after the course has concluded

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*A complete educational tour that will train you in the latest industry trends in Energy Saving in Facilities”*

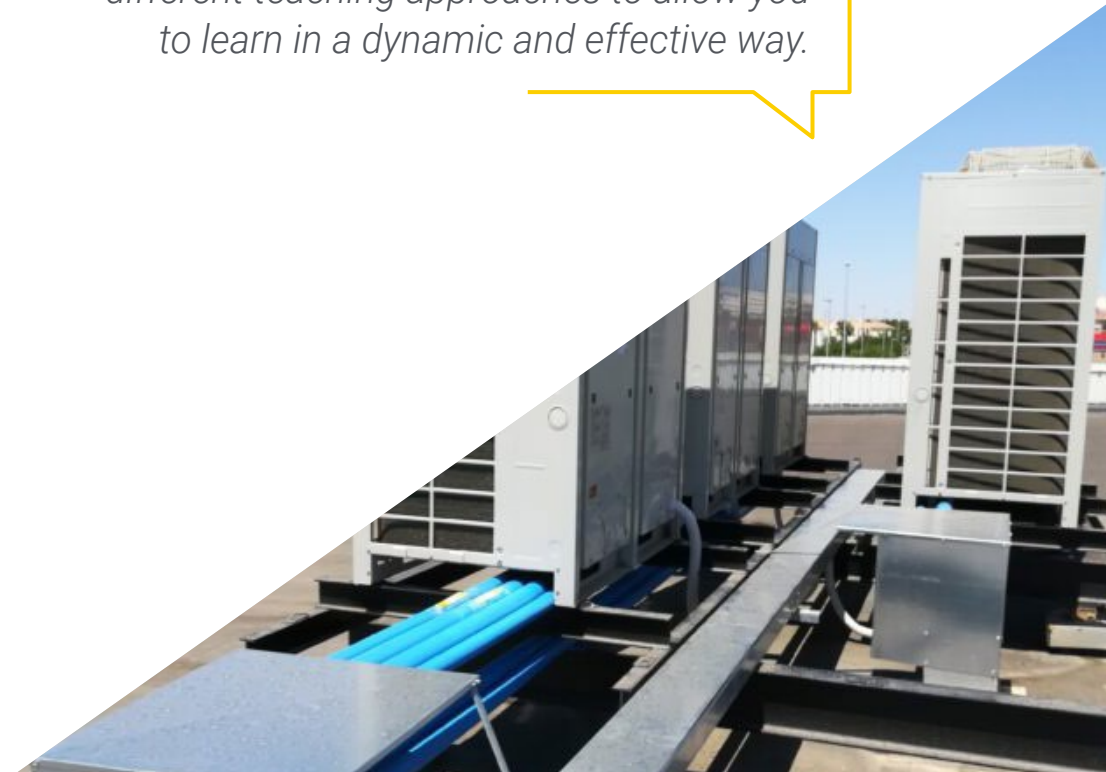
Our teaching staff is made up of professionals from different fields related to this specialty. In this way, we ensure that we provide you with the educational update we are aiming for. A multidisciplinary team of professionals prepared and experienced in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at your service the practical knowledge derived from their own experience: one of the differential qualities of this educational program.

This mastery of the subject matter is complemented by the effectiveness of the methodological design. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your education.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. In order to achieve this remotely, we will use telepractice: With the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

*With the experience of active professionals and the analysis of real cases of success in the application and use of energy saving systems in buildings.*

*With a methodological design based on proven teaching techniques, this innovative course will take you through different teaching approaches to allow you to learn in a dynamic and effective way.*



# 02 Objectives

Our objective is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is materialized in helping professionals to reach a much higher level of competence and control. A goal that, in just a few months you will be able to achieve, with a high intensity and effective training.





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*If your objective is to broaden your skills set to include new paths of success and development, this is your Professional Master's Degree: a training that aspires to excellence”*



## General Objectives

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- ♦ Undertake the particularities to correctly manage the design, project, construction and execution of Energy Rehabilitation Works (Existing Buildings) and Energy Saving (New Buildings)
- ♦ Interpret the current regulatory framework based on current regulations and the possible criteria to be implemented for energy efficiency in buildings
- ♦ Discover the potential business opportunities offered by the knowledge of the various energy efficiency measures, from studying tenders and technical tenders for construction contracts, projecting buildings, analyzing and directing the works, managing, coordinating and planning the development of Energy Saving and Rehabilitation Projects
- ♦ Ability to analyze building maintenance programs developing the study of appropriate energy saving measures to be implemented according to technical requirements
- ♦ Delve into the latest trends, technologies and techniques in the field of Energy Efficiency in the Construction of Buildings



*A path to achieve education and professional growth that will propel you towards a greater level of competitiveness in the employment market"*





## Specific Objectives

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- ◆ Delve into the study of the scope of the study of air conditioning installations, such as parameters relating to the definition, application regulations, technical justifications and various innovative solutions depending on the nature of the building
- ◆ Delve into the study of aérothermal installations, such as definition parameters, application standards, technical justifications and various innovative solutions depending on the nature of the building
- ◆ You will acquire detailed knowledge in the study of ventilation installations with heat recovery, such as parameters related to the definition, application regulations, technical justifications and various innovative solutions depending on the nature of the building
- ◆ Select the type of boiler and pumps with high energy efficiency and air conditioning through radiant floors and ceilings based on the applicable regulations, technical justifications and various innovative solutions depending on the nature of the building
- ◆ Discover the installation opportunities of the Free-cooling system by analyzing its definition, application regulations, technical justifications and various innovation solutions depending on the nature of the building
- ◆ Analyze energy-efficient building lighting and conveyor systems
- ◆ Plan and control the construction of appropriate solar thermal and photovoltaic systems
- ◆ Know the operation of the building's energy consumption control systems by means of home automation and Best Management System (BMS)

03

# Course Management

For our course to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.



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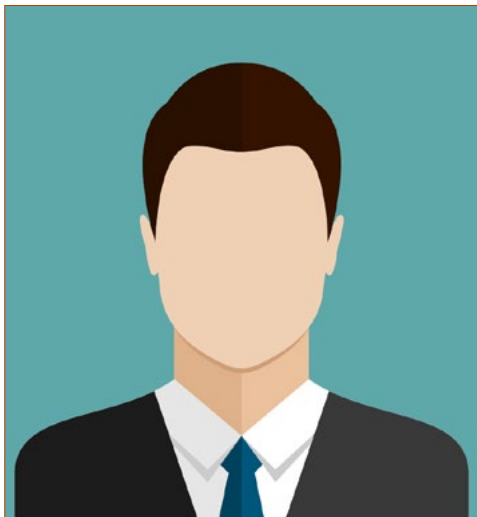
*An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during your training: a unique opportunity not to be missed”*

## Management



### Ms. Dombriz Martialay, Talia

- ♦ Project Manager at DMDV Architects
- ♦ Multiple national and international consultancies for LEED, BREEAM and WELL certifications, as well as PASSIVHAUS
- ♦ Doctorate Level Courses in ETSAM
- ♦ Architect, Building and Urban Planning, Universidad Politécnica de Madrid
- ♦ Architecture from CEU San Pablo University
- ♦ U.S. LEED® AP BD+C qualifications. Green Building Council (USGBC), BREEAM® ES Assessor from the Building Research Establishment (BRE) and WELL™ AP by the International WELL Building Institute (IWBI), and PASSIVHAUS



### Dr. Diederich Valero, Daniel

- ♦ Project Manager and Architect at DMDV Architects PASSIVHAUS
- ♦ Co-founder of CENERGETICA, sustainability consulting in international certifications LEED, BREEAM and WELL.
- ♦ Associate Professor at different higher programs in his field of expertise
- ♦ PhD from the University of Alcalá
- ♦ Architect by the Polytechnic University of Madrid, ETSAM
- ♦ Architect certified in zero energy consumption by Passive House Institut Darmstadt, Germany



## Professors

### Mr. Postigo Castellanos, Juan

- ◆ Technical Architect
- ◆ Manager and Technical Director POSCON S.L.
- ◆ Work execution management
- ◆ Technical Architect from the Polytechnic University of Madrid
- ◆ Master's Degree in Renewable Energies from the European University of Madrid
- ◆ Certified Passive House Consultant by the Passivhaus Institut (Darmstadt, Alemania)
- ◆ Master's Degree in Environment and Bioclimatic Architecture from the Polytechnic University of Madrid.
- ◆ MBA Building at the European Business School

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*A unique, crucial and decisive learning experience to boost your professional development”*

# 04

# Structure and Content

The contents of this training have been developed by the different experts participating in it, with a clear purpose: to ensure that our students acquire each and every one of the skills necessary to become true experts in this field.

A complete and well-structured program that will take you to the highest standards of quality and success.





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*A comprehensive teaching program,  
structured in well-developed teaching units,  
oriented towards learning that is compatible  
with your personal and professional life"*

## Module 1. Energy Saving in Facilities

- 1.1. Air Conditioning Installations
  - 1.1.1. Definition
  - 1.1.2. Regulations
  - 1.1.3. Technical Justifications
  - 1.1.4. Innovation Solutions
- 1.2. Aerothermal Power
  - 1.2.1. Definition
  - 1.2.2. Standards
  - 1.2.3. Technical Justifications
  - 1.2.4. Innovation Solutions
- 1.3. Ventilation with Heat Recovery
  - 1.3.1. Definition
  - 1.3.2. Standards
  - 1.3.3. Technical Justifications
  - 1.3.4. Innovation Solutions
- 1.4. Selection of Energy-Efficient Boilers and Pumps
  - 1.4.1. Definition
  - 1.4.2. Standards
  - 1.4.3. Technical Justifications
  - 1.4.4. Innovation Solutions
- 1.5. Air Conditioning Alternatives: Floor/Ceilings
  - 1.5.1. Definition
  - 1.5.2. Standards
  - 1.5.3. Technical Justifications
  - 1.5.4. Innovation Solutions
- 1.6. Free-Cooling (Free External Air-Cooling)
  - 1.6.1. Definition
  - 1.6.2. Standards
  - 1.6.3. Technical Justifications
  - 1.6.4. Innovation Solutions





- 1.7. Lighting and Transport Equipment
  - 1.7.1. Definition
  - 1.7.2. Standards
  - 1.7.3. Technical Justifications
  - 1.7.4. Innovation Solutions
- 1.8. Solar Thermal Production
  - 1.8.1. Definition
  - 1.8.2. Standards
  - 1.8.3. Technical Justifications
  - 1.8.4. Innovation Solutions
- 1.9. Solar Photovoltaic Production
  - 1.9.1. Definition
  - 1.9.2. Standards
  - 1.9.3. Technical Justifications
  - 1.9.4. Innovation Solutions
- 1.10. Control Systems: Domotics and Best Management Systems (BMS)
  - 1.10.1. Definition
  - 1.10.2. Standards
  - 1.10.3. Technical Justifications
  - 1.10.4. Innovation Solutions



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

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.





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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.*



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

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.

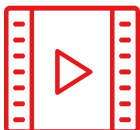
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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.



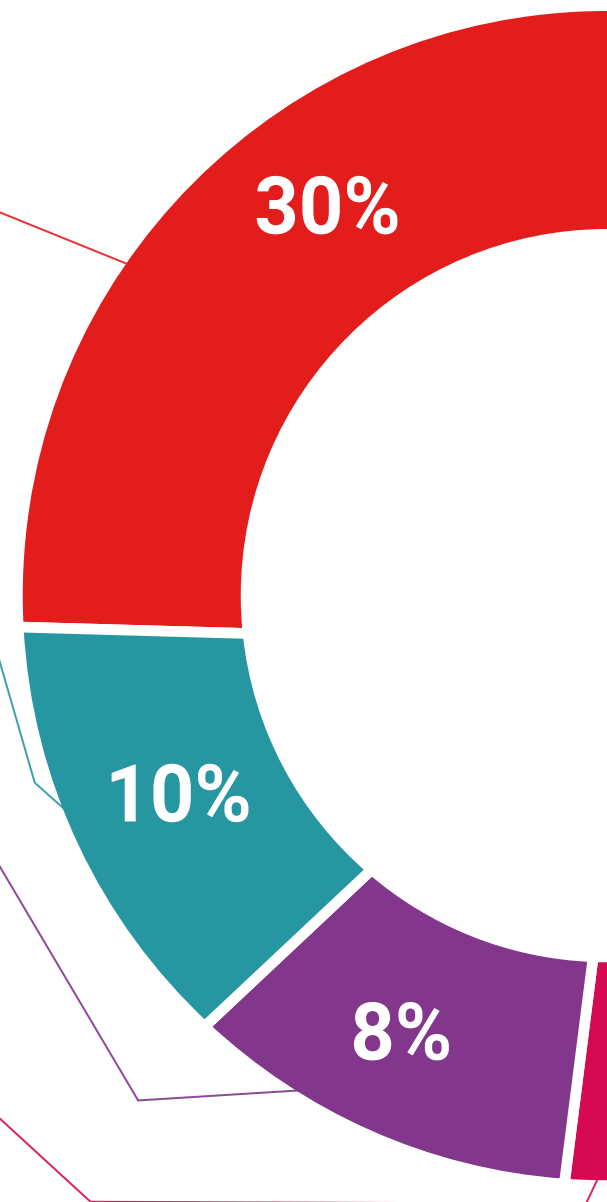
### Practising Skills and Abilities

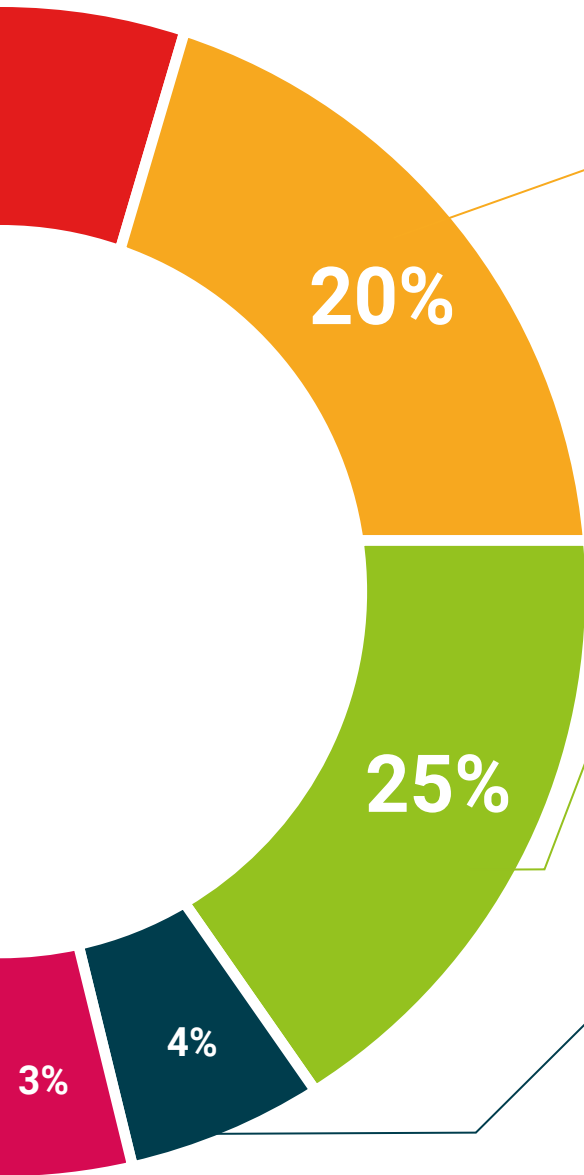
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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 Energy Saving in Facilities guarantees, in addition to the most accurate 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 private qualification will allow you to obtain a **Postgraduate Certificate in Energy Saving in Facilities** 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** private qualification, 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 Energy Saving in Facilities**

Modality: **Online**

Duration: **6 week**

Accreditation: **6 ECTS**



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



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