

Postgraduate Certificate Energy Management Tools in Organizations

ALTERNATOR
BEARING (DE)

ALTERNATOR
BEARING (NOE)

ALTERNATOR
WINDING (L)

tech technological
university



Postgraduate Certificate Energy Management Tools in Organizations

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

Website: www.techtute.com/us/engineering/postgraduate-certificate/energy-management-tools-organizations

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 18

05

Methodology

p. 22

06

Certificate

p. 30

01

Introduction

This program has been created as a high quality educational tool for professionals involved in energy management in organizations, learning how to use the necessary tools in the most efficient way. To this end, we will analyze the current energy regulatory framework, focusing on the adaptation of European directives in the market. A complete review that will allow you to advance in the sector as a specialist.



“

A high quality program that will allow you to learn everything you need to use Energy Management Tools in Organizations"

This program will address the different types of regulatory inspections and their associated functions.

On the other hand, we will discuss in depth the process of energy audits according to UNE EN 16247-1: 2012, which includes the analysis of energy consumption, the study of the energy inventory and the development of energy saving measures. The different energy simulation tools differentiated by energy systems will also be analyzed.

The benefits and importance of supply management, which is based on real-time monitoring of energy systems, will be highlighted. Asset management according to ISO 55001 and the benefits of its implementation will be covered.

Education will be provided on the International Protocol for Measurement and Verification of Energy Savings (IPMVP), the calculation of savings and the establishment of baselines. Energy efficiency master plans and the methodology for their preparation will be discussed in detail.

Finally, a detailed breakdown will be given of the financing channels for the development of projects involving energy savings and/or efficiency.

By completing and passing the assessments on this program, the student will obtain a solid knowledge of the rules and regulations to be applied in relation to Energy Management Tools in Organizations. A complete, high-intensity program, which will allow incorporating into practice the most updated knowledge in this field of work. A highly interesting subject due to its current relevance and the mandatory integration of the standards that will be studied in the program.

With an approach focused on efficiency, this Postgraduate Certificate has been created to allow students to optimize their efforts and achieve the best learning results in the shortest possible time. Additionally, as it is a 100% online program, the student is not constrained by fixed timetables or the need to move to another physical location, but can access the contents at any time of the day, balancing their professional or personal life with their academic life.

This **Postgraduate Certificate in Energy Management Tools in Organizations** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- ♦ Practical cases presented by experts in Environmental and Energy Management in Organizations
- ♦ 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 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



A qualitative leap in your professional practice that will give you the necessary competitiveness in this sector"

“

With comprehensive and up-to-date teaching material and the best audiovisual systems on the educational market, to provide you with an immersive learning experience”

Supported by excellent multimedia content, developed with the latest educational technology, this program will provide the professional with situated and contextual learning, i.e., study in a simulated environment that will provide immersive learning programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, which means the student must try to solve the different real-life situations of that arise throughout the academic program. For this purpose, the professional will be assisted by an innovative interactive video system, developed by renowned and experienced experts in Energy Management Tools in Organizations

A 100% online Postgraduate Certificate that will allow you to combine your studies with your professional work with maximum organizational flexibility.

With a broad and innovative look at the way of working that the sector is implementing in recent times.



02 Objectives

The general objective of this Postgraduate Certificate is to promote the professional's capacity to act in this field so that they can incorporate the main advances in this field of work and intervention.



“

The objective of this program is to give you the most comprehensive and up-to-date knowledge on all aspects involved in the use of Energy Management Tools in Organizations”



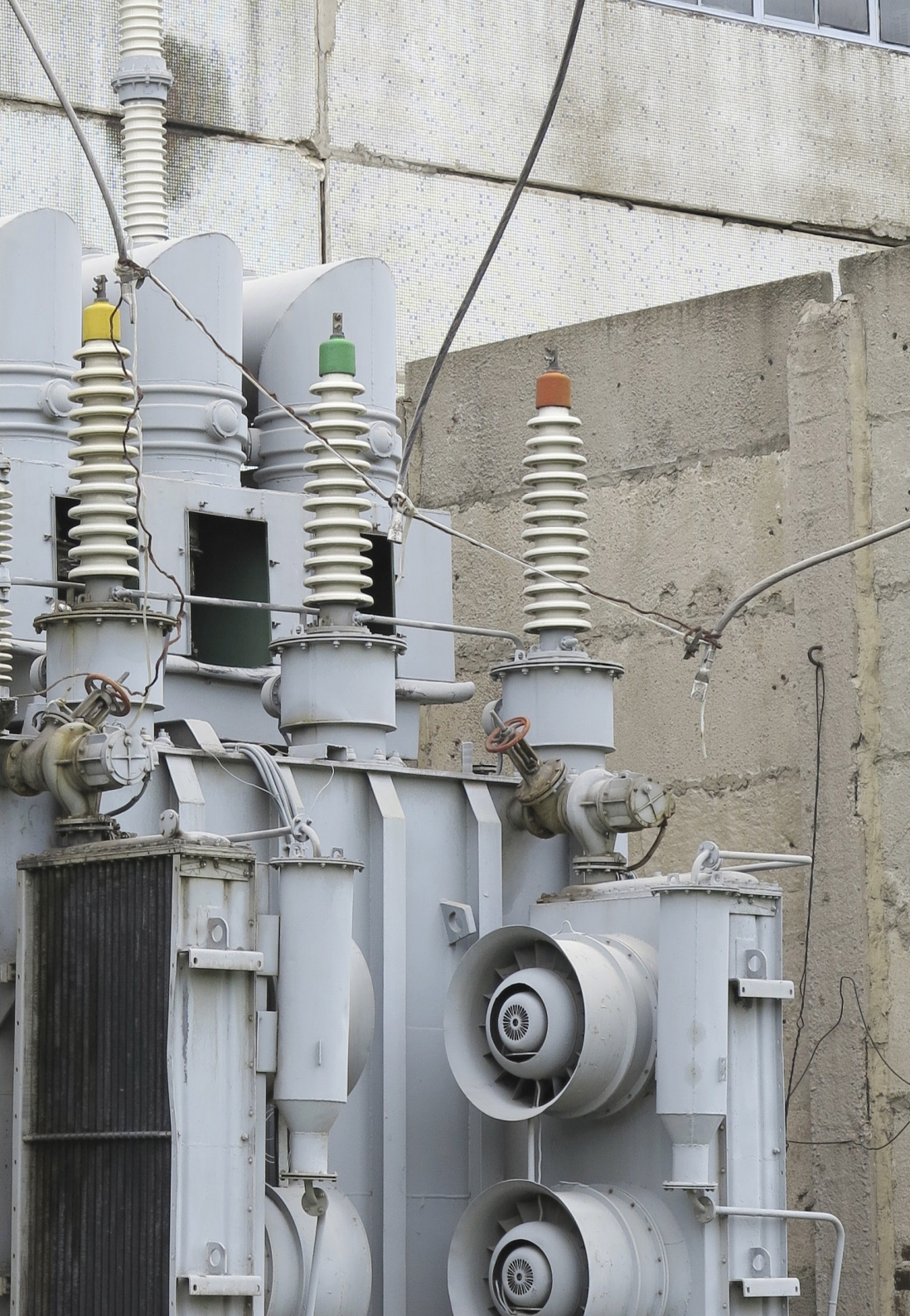
General Objectives

- ♦ Training in the use of environmental and energy tools
- ♦ Conduct energy audits

“

The boost you've been looking for, with the convenience of the highest quality online teaching on the market"





Specific Objectives

- ♦ Achieve a broad vision of the current applicable regulations
- ♦ Master regulatory inspections of energy systems
- ♦ Develop energy audits according to UNE EN 16247-1: 2012
- ♦ Identification and use of energy simulation tools
- ♦ Study consumption monitoring and asset management in detail
- ♦ Elaborate energy efficiency master plans

03

Course Management

A multidisciplinary teaching faculty will offer the most up-to-date and comprehensive knowledge in this field, accompanying accompanied during the learning process and making available their experience and real vision of the profession. A unique opportunity to learn directly from experts in this field of work.



“

You will learn from experts in this sector, who will provide you with a specific and direct vision of the reality of this field of work"

International Guest Director

With an exceptional professional career, Sarah Carson has focused her research on **environmental compliance and sustainability in higher education**. For more than 3 decades, she has been part of Cornell University's research team charged with implementing and analyzing the **impact of policies** for the **care of natural resources**. Thanks to her experience in this area of expertise, she has been chosen to lead the **Office of Campus Sustainability** at Cornell University.

In this way, this expert directs the **electricity supply projects**, aimed at **reducing the carbon footprint** of the higher education center. As such, she has implemented innovative technologies that help, for example, to maintain high temperatures during the winter in the educational facilities. Specifically, her team has opted to implement a **renewable geothermal heat source** called "ground-source heat", the beneficial results of which have already been reported in **several global impact reports**.

At the same time, she has actively participated in the **energy policy of New York**, related to the generation of renewable energy. To this end, she has collaborated in the volunteer program for the **Regional Greenhouse Gas Initiative** in this US state. The latter is based on the **Cap and Trade model**, which allows the university, the local government and other participants to **claim renewable energy credits**.

As for her academic life, Carson holds a degree in **Natural Resources Management and Policy** from North Carolina State University. She also holds a degree in **Environmental Science and Policy** from the School of Environmental Science and Forestry at the State University of New York.



Ms. Carson, Sarah

- Director, Office of Sustainability, Cornell University, New York, United States
- Head of Campus Climate Action, Cornell University, New York, USA
- Environmental Management Specialist, Cornell University
- Environmental Information Officer, Cornell University
- B.S. in Natural Resource Management and Policy from North Carolina State University
- B.S. in Environmental Science and Policy from the State University of New York

“

Thanks to TECH, you will be able to learn with the best professionals in the world”

Management



Mr. Abreu Acosta, Guzmán

- ♦ Technician in the area of Territorial Planning and Management at Gestión y Planeamiento Territorial y Medioambiental de Canarias
- ♦ Degree in Law
- ♦ Occupational Health and Safety Auditor, Specialization in OSHAS 18001
- ♦ Degree in Environmental Sciences. UNIVERSITY OF HUELVA
- ♦ Lawyer in his own law firm, specialized in Urban Development and Environmental Law
- ♦ Freelance consultant specializing in Risk Prevention, Quality and Environment

Professors

Mr. Espinosa, César

- ♦ Head of the Environment Service of Arona City Council
- ♦ Degree in Law
- ♦ Recipient of the IV Felipe González Vicent Prize, Faculty of Law ULL in 1994.
- ♦ UNESCO Global Geopark El Hierro Technical Manager
- ♦ Technical Manager El Hierro World Biosphere Reserve
- ♦ Legal Coordinator of the Department of Rural and Marine Affairs and the Environment of the Island Council of El Hierro (2011-2015).
- ♦ Technical Project Manager

Mr. Palanco, César

- ♦ Director - Manager INTENSA PROMILAB
- ♦ Industrial Engineer. Mechanical Intensification
- ♦ Industrial Technical Engineer. Industrial Electronics Specialty
- ♦ Construction Manager
- ♦ Installation and testing technician
- ♦ Purchasing Manager TOGOGAS Huelva S.L.
- ♦ Installation technician TOGOGAS Huelva S.L.
- ♦ Commercial Delegate TOGOGAS Huelva S.L.

Mr. Contreras Acuña, Manuel

- ♦ Teacher (Secondary, Vocational Training)
- ♦ Doctor in Chemical Sciences Faculty of Experimental Sciences, University of Huelva
- ♦ Master's Degree in Instrumental Techniques in Chemistry, Faculty of Experimental Sciences, University of Huelva.
- ♦ Triple Master's Degree in Occupational Health and Safety, Quality and Environmental Management
- ♦ Interim Substitute Professor Department: Chemistry and Materials Science
- ♦ Contract Researcher Department: Chemistry and Materials Science

Mr. Toscano, Manuel

- ♦ Professor of the Department of Earth Sciences of the University of Huelva.
- ♦ Degree in Geological Sciences from the University of Granada
- ♦ Technical Engineer in Drilling and Mining Prospecting
- ♦ Technical Engineer in Energy, Fuels and Explosives Resources
- ♦ Degree in Mine Exploitation from the University of Huelva
- ♦ Author and/or co-author of more than ninety national and international contributions
- ♦ National and international projects financed by the Andalusia Council, the Spanish government and the European Union.

Mr. Bueno Márquez, Pedro

- ♦ Technician of the Directorate General of Vocational Training, Ministry of Education and Sports
- ♦ Chemical Engineering 1997 - 2002 University of Huelva
- ♦ Postgraduate Course on Renewable Energy Management and Development, Catholic University of Avila
- ♦ Technical Teacher of Vocational Training. Department of Education and Sports
- ♦ Andalusian Energy Agency Technician
- ♦ Project Engineer. Aldesa Engineering & Services
- ♦ Project Engineer. Andalusian Studies Group (Grande S.L.)

Ms. Granell García, Lilia

- ♦ Manager and Administrator of Recap Canarias Finance
- ♦ Degree in Physical Sciences, specializing in Fundamental Physics
- ♦ Recap ibérica Financa, Ltd.
- ♦ Technical and commercial director SOTEC group
- ♦ Technical and commercial director SEIFERMANN
- ♦ CEO of CERCAN

04

Structure and Content

The syllabus of this program includes the use of the different tools that are applied in energy management, with the consideration and analysis of all the existing possibilities in this field. A program specifically created to provide our students with a continuous process of skills improvement that will boost their real capacity for intervention.





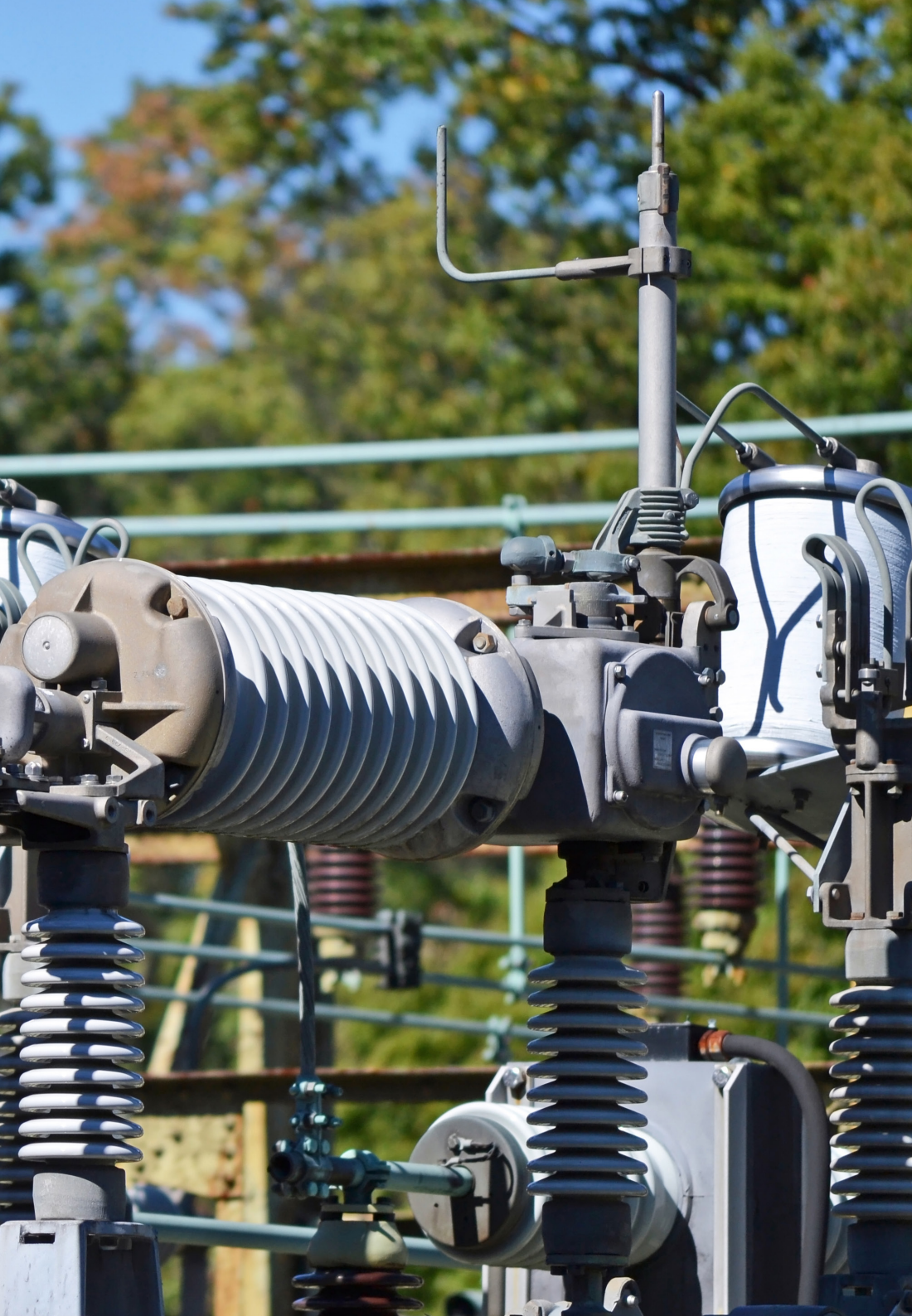
“

A stimulating and flexible process that will allow you to acquire the skills required to intervene as an expert"

Module 1. Energy Management Tools

- 1.1. Energy Regulatory Framework
 - 1.1.1. European Energy Efficiency Directive
 - 1.1.2. Transpositions of the Directive to the National Market
 - 1.1.3. Main Energy Regulations
- 1.2. Regulatory Inspections
 - 1.2.1. Air Conditioning Inspections
 - 1.2.2. High/Low Voltage Inspections
 - 1.2.3. Other Regulatory Inspections
- 1.3. Energy Audits
 - 1.3.1. Conducting an Energy Audit Identification of Improvement Opportunities
 - 1.3.2. UNE EN 16247-1: 2012
 - 1.3.3. Royal Decree 56/2016
- 1.4. Energy Simulation tools
 - 1.4.1. Light Simulations
 - 1.4.2. Air Conditioning Simulations
 - 1.4.3. Building Energy Demand Simulations
- 1.5. Supply Management: Monitoring
 - 1.5.1. Types of Monitoring
 - 1.5.2. Energy Management Platforms
 - 1.5.3. Fundamental Equipment
- 1.6. Energy Services
 - 1.6.1. Energy Services
 - 1.6.2. Energy Services Companies
 - 1.6.3. Types of Contracts





- 1.7. IPMVP
 - 1.7.1. Calculating Savings Avoided Cost and Standardized Savings Models
 - 1.7.2. Options A, B, C and D
 - 1.7.3. Establishing Baselines
- 1.8. Energy Efficiency Master Plans
 - 1.8.1. Methodology for Preparing a Master Plan
 - 1.8.2. Management Models
 - 1.8.3. Energy Efficiency within a Master Plan
- 1.9. Asset Management
 - 1.9.1. What is Asset Management?
 - 1.9.2. ISO 55001 Asset Management
 - 1.9.3. Benefits of Implementing Asset Management
- 1.10. Grants and Subsidies
 - 1.10.1. European Grants and Subsidies
 - 1.10.2. National Grants and Subsidies
 - 1.10.3. Regional Grants and Subsidies



*Everything you need to learn,
in a comprehensive and up-to-
date program that will allow
you to work and study without
organizational problems"*

05 Methodology

This training program offers 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"

At TECH we use the Case Method

Our program offers a revolutionary method of skills and knowledge development. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

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



We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.



A learning method that is different and innovative.

This intensive Engineering program at TECH Technological University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH Technological University you will use Harvard case studies, with which we have a strategic agreement that allows us, to offer you material from the best university in the world.

“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 by 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.

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

Relearning Methodology

TECH is the first university in the world to combine Harvard University case studies with a 100% online learning system based on repetition, which combines 8 different didactic elements in each lesson.

We enhance Harvard case studies 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 university 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.

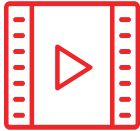
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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

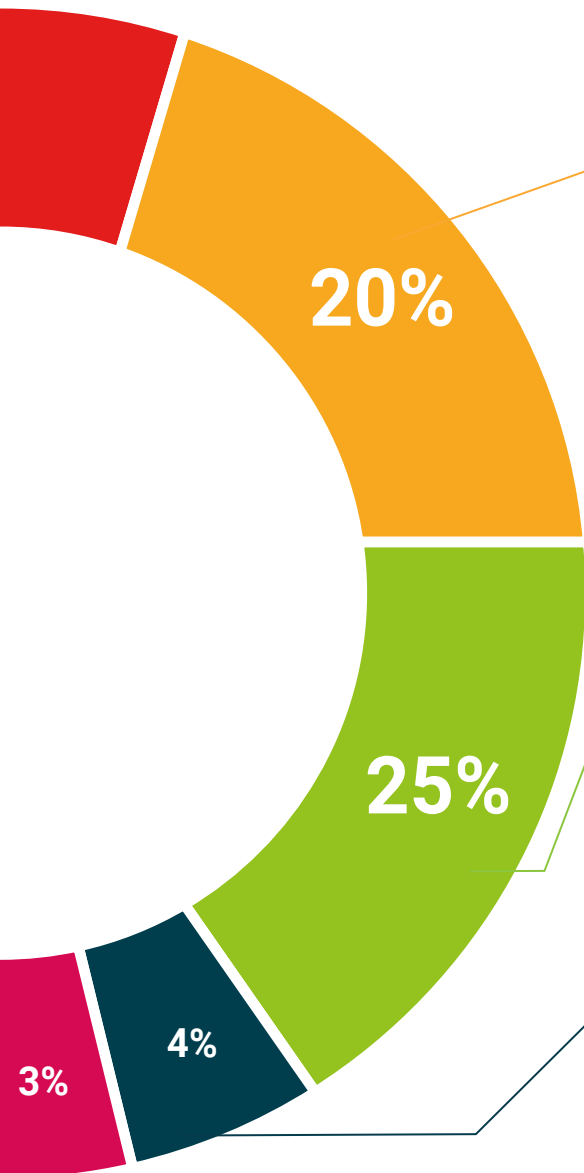
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.



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**

They will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management 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 multimedia content presentation training Exclusive system 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 your goals.



06 Certificate

The Postgraduate Certificate in Energy Management Tools in Organizations guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



“

*Successfully complete this program and
receive your university degree without travel
or cumbersome paperwork”*

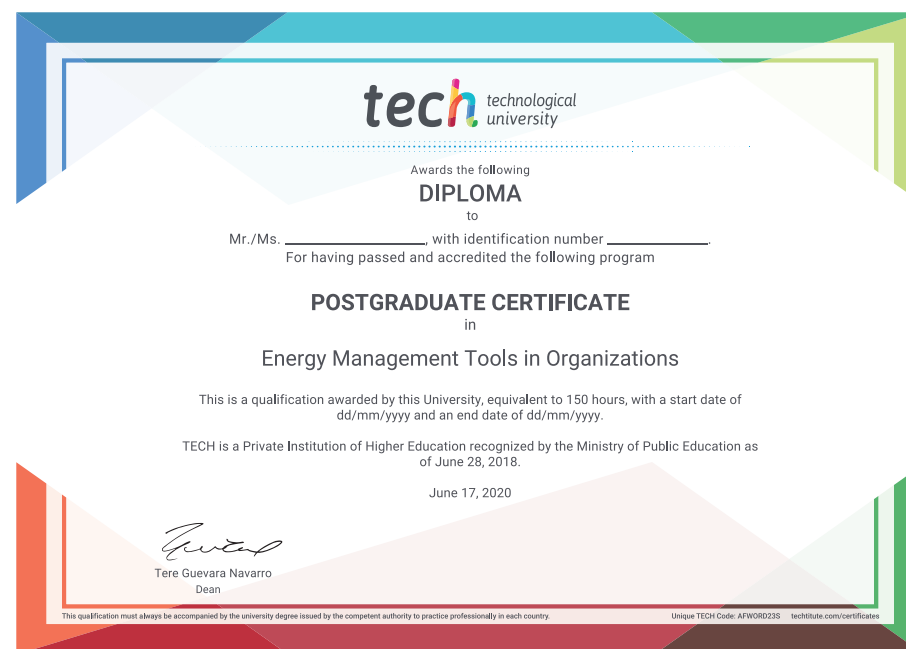
This **Postgraduate Certificate in Energy Management Tools in Organizations** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** diploma issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Energy Management Tools in Organizations**

Official N° of hours: **150 h.**



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

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



Postgraduate Certificate Energy Management Tools in Organizations

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

Postgraduate Certificate Energy Management Tools in Organizations