



Postgraduate Diploma

Energy Management Tools in Organizations

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/pk/school-of-business/postgraduate-diploma/postgraduate-diploma-energy-management-tools-organizations

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01 **Welcome**

The environment is an issue of growing concern to more and more companies, because as the years go by, regulations regarding pollution and the benefits of incorporating so-called green energies into the business scheme are increasing. In anticipation of the current importance of environmental practices in energy issues, TECH has developed this program, with advanced knowledge of sustainable resources. Professionals who wish to distinguish themselves professionally in this field and achieve higher economic remuneration will find all the necessary tools to provide valuable solutions to the companies in which they decide to lead the energy revolution.









tech 08 | Why Study at TECH?

At TECH Technological University



Innovation

The university offers an online learning model that combines the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95%

of TECH students successfully complete their studies



Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

100,000+

200+

executives trained each year

different nationalities



Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

500+

collaborative agreements with leading companies



Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



At TECH, you will have access to the most rigorous and up-to-date case studies in the academic community"

Why Study at TECH? | 09 tech

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



Analysis

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding academic itinerary.



Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.





tech 12 | Why Our Program?

This program will provide students with a multitude of professional and personal advantages, particularly the following:



A significant career boost

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of participants achieve positive career development in less than 2 years.



Develop a strategic and global vision of companies

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional areas.

Our global vision of companies will improve your strategic vision.



Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.



Take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.



Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.



Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different areas in companies.

20% of our students develop their own business idea.



Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.



Be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified professors from the most prestigious universities in the world: the TECH Technological University community.

We give you the opportunity to train with a team of world renowned teachers.





tech 16 | Objectives

TECH makes the goals of their students their own goals too. Working together to achieve them.

This **Postgraduate Diploma in Energy Management Tools in Organizations** prepares students to:



Achieve a broad vision of the current applicable regulations



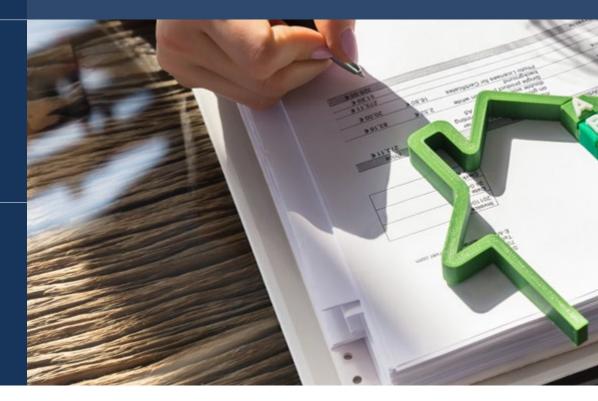
Identify and use energy simulation tools



Master regulatory inspections of energy systems



Develop energy audits according to UNE EN 16247-1: 2012





Study consumption monitoring and asset management in detail



Elaborate energy efficiency master plans





Gain an in depth understanding of current energy sources and their impact on the environment



Analyze the operation, advantages and disadvantages of renewable energies



Understand in detail the different processes of electrical and thermal generation



Analyze the main characteristics of electrical energy consuming equipment



Identify the operation and application of developing energy sources



Have in-depth knowledge of all aspects related to the generation and consumption of electrical energy





Identify the most important aspects of energy billing



In depth breakdown of all aspects related to the generation and consumption of energy generated from combustion



15

Establish the main characteristics of combustion systems and fuels in detail

16

Gain in depth knowledge of the main energy management tools





tech 22 | Structure and Content

Syllabus

This TECH Postgraduate Diploma contains the most innovative elements in terms of energy management. Throughout the program, students will delve into the legal framework of energy tools, as well as the different types of possible energies and the most common energy consumption systems on the market.

During the 450-hour program, students will learn, through real case studies, how to efficiently manage an organization's energy, as well as the most practical ways to control energy expenditure and electricity bills.

The program is, therefore, a great opportunity for students to soak up the latest energy market developments.

This will be a great support for you to apply to large companies where energy management is of utmost importance.

It is a 6 month program divided into 3 modules:

Module 1	Energy Management Tools
Module 2	Energy Sources
Module 3	Electrical Energy



Where, when and how is it taught?

TECH offers the possibility of developing this Postgraduate Diploma in Energy Management Tools in Organizations completely online. Over the course of 6 months, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.

tech 24 | Structure and Content

Module 1. Energy Management Tools

1.1. Energy Regulatory Framework

	Main Energy Regulations	1.2.1. 1.2.2.	Air Conditioning Inspections High-/Low-Voltage Inspections Other Regulatory Inspections	1.3.1.	Energy Audit Development and Improvement Opportunity Identification UNE EN 16247-1:2012	1.4.1. 1.4.2.	Light Simulations Air Conditioning Simulations Building Energy Demand Simulations
1.5.1. 1.5.2.	Supply Management: Monitoring Types of Monitoring Energy Management Platforms Fundamental Equipment	1.6.2.	Energy Services Energy Services Energy Service Companies Types of Contracts	1.7.1. 1.7.2.	IPMVP Calculating Savings Avoided Cost and Standardized Savings Models Options A, B, C and D Establishing Baselines	1.8.2.	Energy Efficiency Master Plans Methodology for Preparing a Master Plan Management Models Energy Efficiency within a Master Plan
1.9.2.	Asset Management What Is Asset Management? ISO 55001 Asset Management Benefits of Implementing Asset Management						
	lule 2. Energy Sources						
2.1.1.	Fossil Fuels Coal Natural Gas Oil	2.2.2.	Electricity Electricity Generation Uses of Electricity	2.3.1. 2.3.2. 2.3.3. 2.3.4.	Nuclear Energy Nuclear Power Plants Environmental Opportunities Environmental Risks Nuclear Waste Treatment	2.4.1. 2.4.2. 2.4.3.	Solar Energy Electricity Generation Thermal Generation Solar Power Plants Risks and Opportunities
2.5.2.	Wind Energy Wind Farms Advantages and Disadvantages	2.6.1. 2.6.2.	Biomass Thermochemical and Biochemical Methods The Biomass Market Adventages and Disadventages	2.7.1. 2.7.2.	Geothermal Energy Geothermal Deposits Electricity Generation Advantages and Disadvantages	2.8.1. 2.8.2.	Other Renewable Energies Hydraulic Energy Tidal Energy
2.0.5.	Microgeneration	2.6.3.	Advantages and Disadvantages	2.7.3.	Auvantages and Disauvantages	2.0.3.	Wave Energy

1.3. Energy Audits

1.4. Energy Simulation tools

1.2. Regulatory Inspections

Module 3. Electrical Energy 3.1. Electrical Energy: Voltage, Current, 3.3. Electrical Energy Consuming 3.4. Other Electricity Consuming 3.2. Energy Transformation Power and Energy Systems: Electric Engines 3.2.1. Power Transformers Systems 3.2.2. Electricity Transportation 3.1.1. Voltage and Current 3.3.1. Applications, Pumps, Fans and Compressors 3.4.1. Joule Effect 3.2.3. Electricity Distribution 3.1.2. Active, Reactive and Apparent Energy 3.3.2. Frequency Inverters 3.4.2. Lighting 3.4.3. Direct Current Powered Systems 3.1.3. Electrical Power: Load Curves 3.3.3. Motor-Driven Consumer Systems: Heat Pump Air Conditioning 3.6. Units of Measurement of 3.8. Boilers **Electricity Billing** Combustion Systems and Fuel Fuel Consumption and their Elements 3.5.1. Legislation 3.8.1. Calculation of Boiler Efficiency by Direct and 3.5.2. Electricity Rates Transformation into Energy Units Indirect Method 3.7.1. Combustion Efficiency 3.8.2. Types of Heat Transfer Fluids 3.5.3. Electricity Billing Term 3.7.2. Burners 3.6.1. Energy Produced by Heat of Combustion: 3.8.3. Steam Boilers 3.7.3. Heat Transfer HHV and LLV 3.6.2. Volumetric Measurements of Combustible Liquids 3.6.3. Volumetric Measurements of Combustible Gases: Establishment and Calculation of Normal Conditions Other Fuel Consuming Equipment 3.10. Fuel Billing 3.9.1. Ovens 3.10.1. Legislation 3.9.2. Engines

3.10.2. Natural Gas Rates

3.10.3. Natural Gas Billing Terms

3.9.3. Generating Sets



Stay ahead of your competitors with better and more efficient energy use in a field that is becoming more and more relevant as time goes by"



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.





tech 28 | Methodology

TECH Business School uses the 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.





This program prepares you to face business challenges in uncertain environments and achieve business success.



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

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.



You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments"

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

tech 30 | Methodology

Relearning Methodology

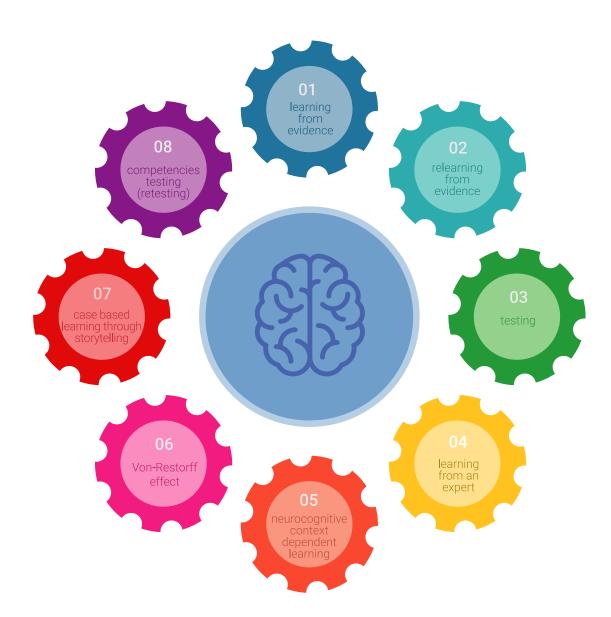
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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 online business school is the only one in the world licensed to incorporate 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.



Methodology | 31 tech

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. With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.



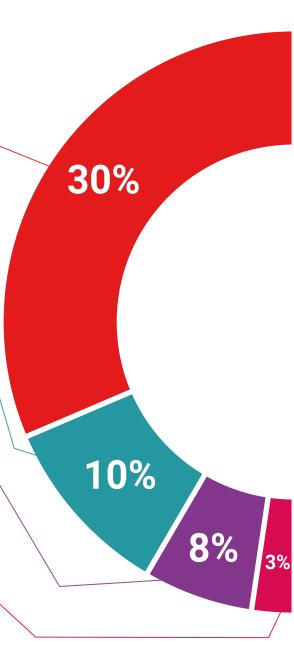
Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager 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.





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 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 educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Testing & Retesting

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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.

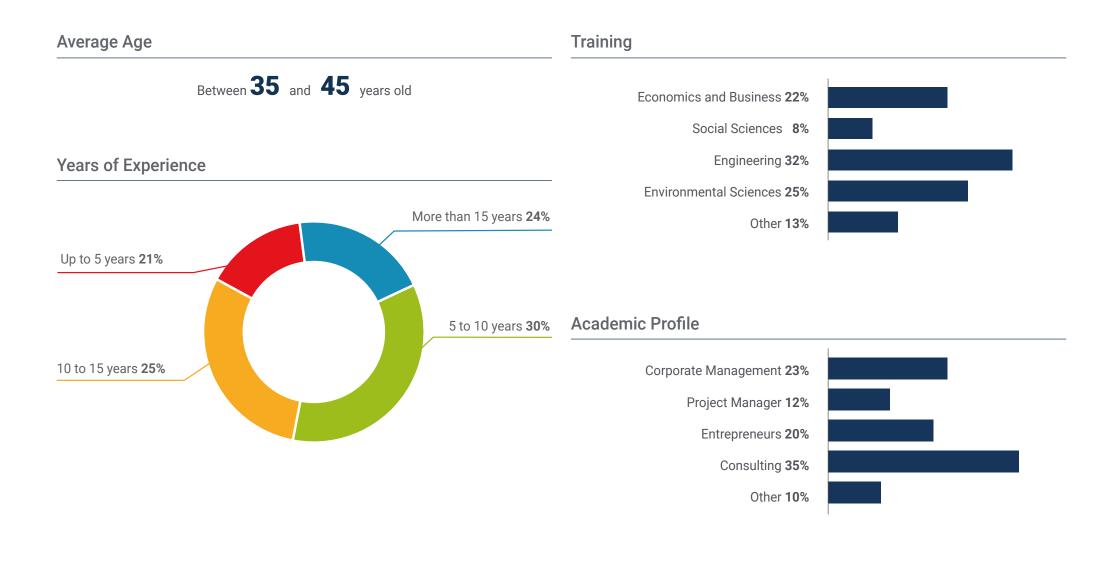


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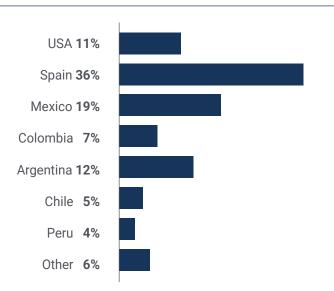




tech 36 | Our Students' Profiles



Geographical Distribution





Pablo Menéndez

Energy Consultant

"I had been looking for some time for a suitable program to bring me up to date on the main energy management tools in organizations, with my main goal being to be able to apply them to my daily work as an energy consultant. Luckily, I found this TECH program that included everything I needed: a fully updated syllabus, a 100% online format and teaching methodology that relies on case studies as the main learning method"





tech 40 | Course Management

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.
- 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
- 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.

Ms. Granell García, Lilia

- Manager and Administrator of Recap Canarias Finance Bachelor of Science in Physics, specializing in Fundamental Physics
- Recap ibérica Financa, ltd.
- Technical and commercial director SOTEC group
- Technical and commercial director SEIFERMANN
- ◆ CEO of CERCAN

Mr. Contreras Acuña, Manuel

- Contract Researcher Department: Chemistry and Materials Science
- 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

Mr. Toscano, Manuel

- Technical Engineer in Drilling and Mining Prospecting
- Degree in Geological Sciences from the University of Granada
- 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, 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.)





tech 44 | Impact on Your Career

Are you ready to take the leap? Excellent professional development awaits you

This Postgraduate Diploma in Energy Management Tools in Organizations by TECH, directs its students towards job success with top quality instruction in a matter of urgency in the business world, thus preparing them to lead the energy revolution in the industry which they decide to act or focus.

Improve your energy management skills by getting up to speed with TECH.

The best way to achieve career success is to achieve a higher qualification in your field. So don't think twice and join TECH.

When the change occurs



Type of change



Salary increase

This program represents a salary increase of more than 25.22% for our students

\$57,900

A salary increase of

25.22%

\$72,500





tech 48 | Benefits for Your Company

Developing and retaining talent in companies is the best long-term investment.



Intellectual Capital and Talent Growth

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.



Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the executive and opens new avenues for professional growth within the company.



Building agents of change

The professional will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.



Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.







Project Development

Professionals will be work on a current project or develop new projects in the field of R&D or Business Development within their company.



Increased competitiveness

This program will equip students with the skills to take on new challenges and drive the organization forward.





tech 52 | Certificate

This **Postgraduate Diploma in Environmental and Energy Management in Organizations** contains the most complete and up to date educational program on the market.

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

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

Title: Postgraduate Diploma in Environmental and Energy Management in Organizations

Official No of hours: 450 h.



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



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