



### Postgraduate Certificate

Electrical Energy in Organizations

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/school-of-business/postgraduate-certificate/electrical-energy-organizations

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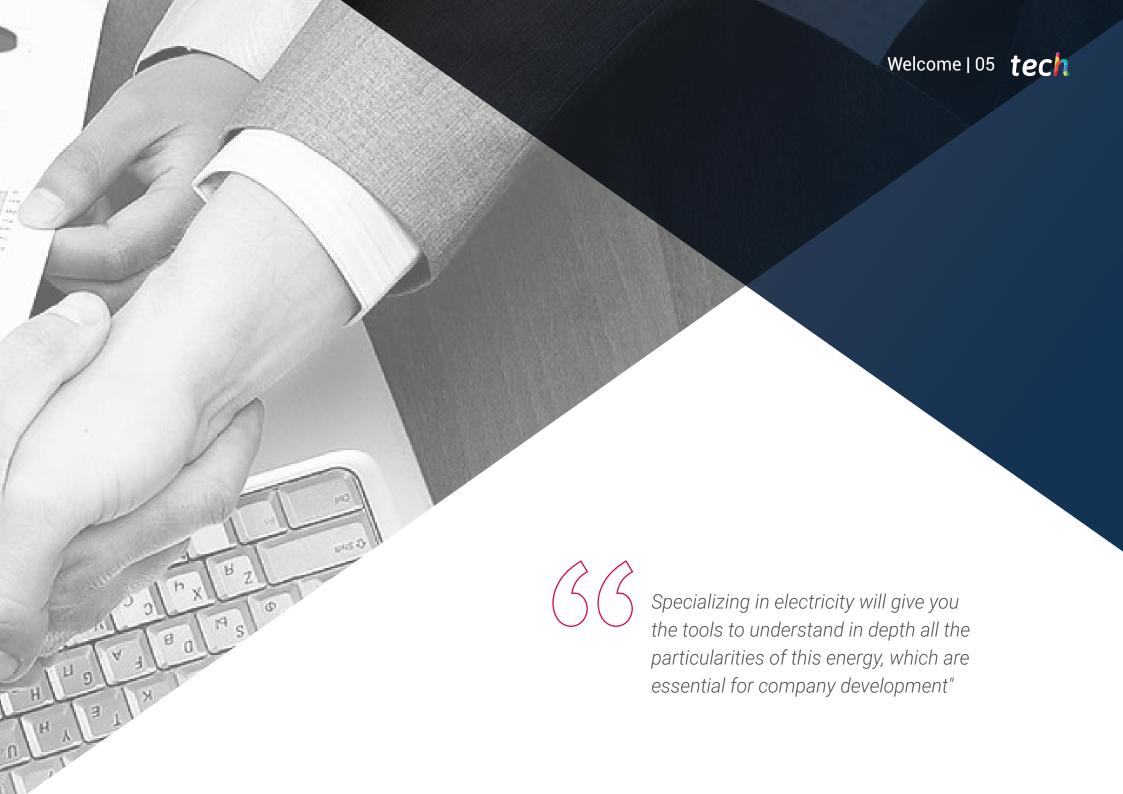
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Certificate

# 01 **Welcome**

Business professionals who wish to develop successfully in environmental and energy management must be aware that they must be able to handle a wide range of expertise in different fields, including electrical energy in organizations, which will enable them to understand the importance of electricity in every business process. For this reason, TECH has designed this program, which establishes the parameters that define electricity, including voltage, current, and the relationships between active, reactive and capacitive powers. Likewise, the energy transformation and distribution processes are clearly explained, as well as the equipment necessary to carry out the transformation and distribution and how these processes affect the final energy consumed, among other fundamental issues to work in this field. Undoubtedly, a high-level academic program that will help business professionals to become great experts in this field, making a difference in the market and providing them with greater employability prospects.









### tech 08 | Why Study at TECH?

### At TECH Global 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**

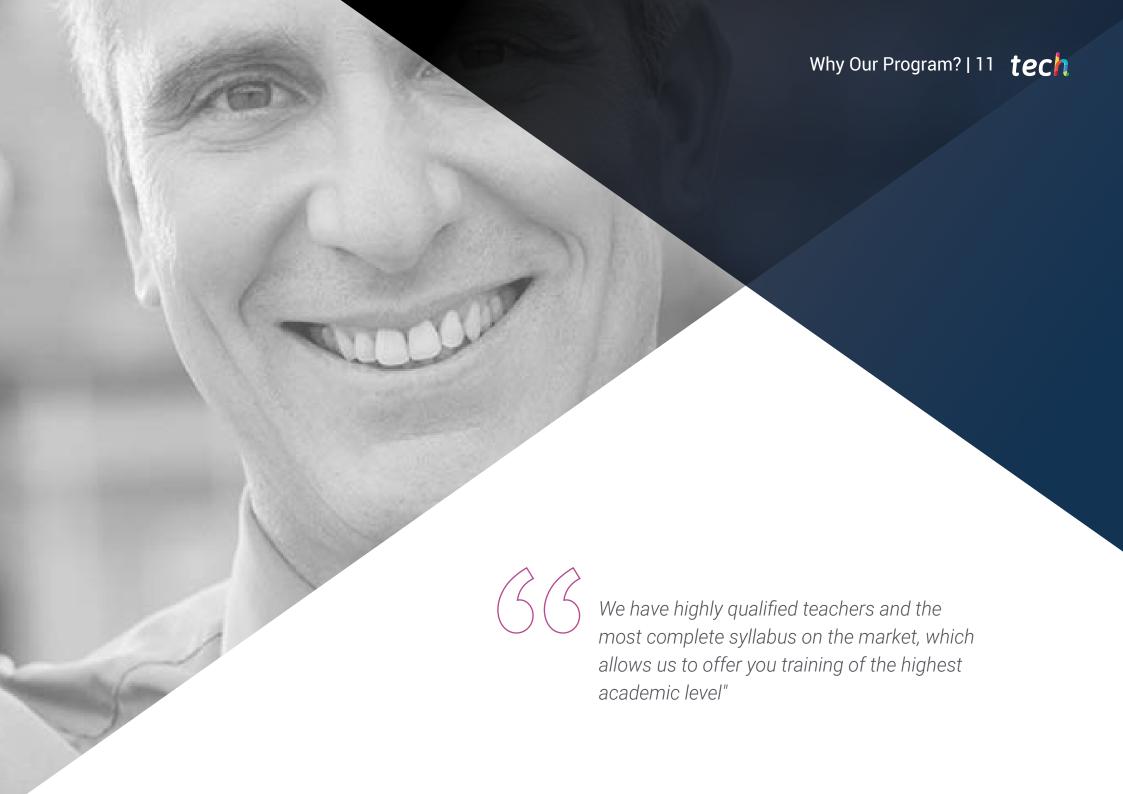
TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding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

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



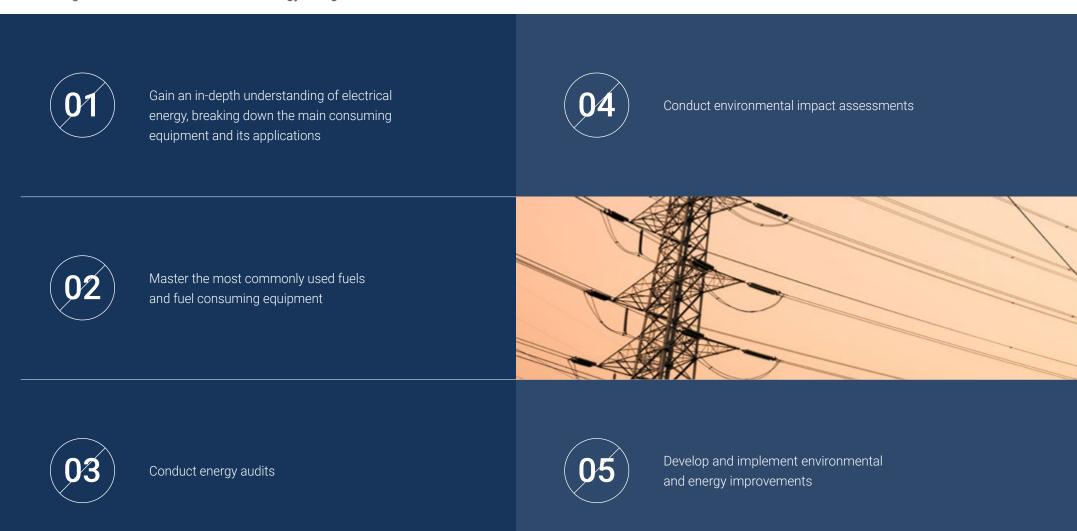


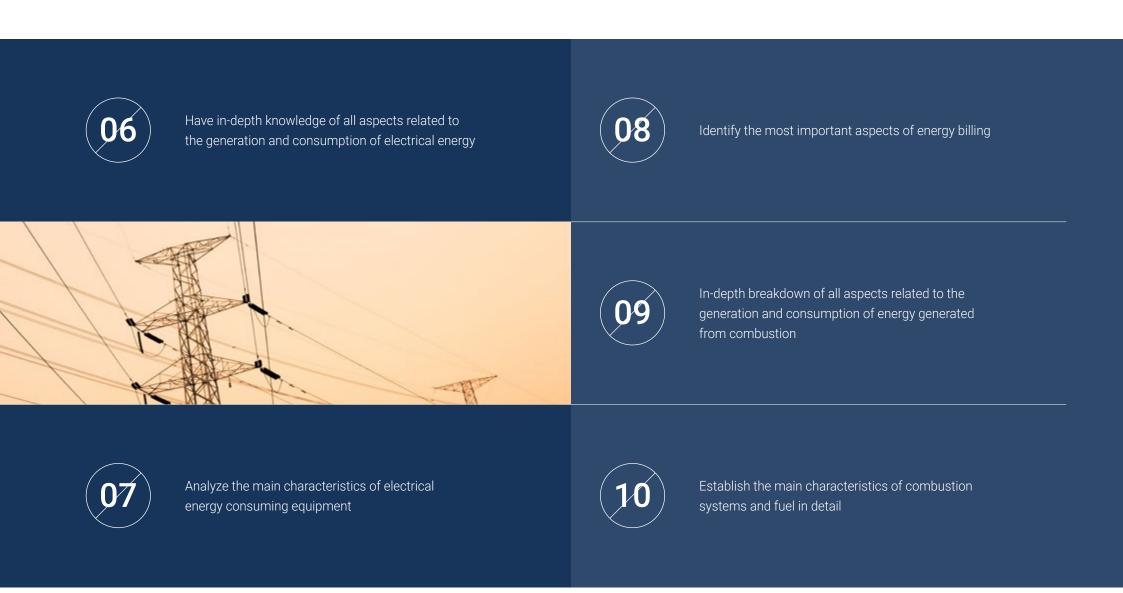
### tech 16 | Objectives

Your goals are our goals.

We work together to help you achieve them.

The Postgraduate Certificate in Electrical Energy in Organizations will enable students to:









### tech 20 | Structure and Content

### **Syllabus**

This Postgraduate Certificate in Energy Sources in Organizations at TECH Global University is an intensive program that prepares students to face challenges and business decisions in the field of energy and environmental management. Its content is designed to promote the development of managerial skills that enable more rigorous decision-making in uncertain environments.

Throughout 180 hours of study, students will learn a multitude of practical cases through individual work, which will allow them to acquire the necessary skills to develop successfully in their daily practice. It is, therefore, an authentic immersion in real business situations.

This program deals in-depth with different areas of the company and is designed for managers to learn about electrical energy and its application, from a strategic, international and innovative perspective.

A plan designed especially for students, focused on their professional improvement and preparing them to achieve excellence in the field of energy management. A program that understands your needs and those of your company through innovative content based on the latest trends, and supported by the best educational methodology and an exceptional faculty, which will provide you with the competencies to solve critical situations in a creative and efficient way.

It is a 6-week program distributed in one module:

Module 1

**Electrical Energy** 



### Where, when and how is it taught?

TECH offers the possibility of developing this Postgraduate Certificate in Electrical Energy in Organizations completely online. Over the course of 6 weeks, 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 22 | Structure and Content

Module 1. Electrical Energy			
<ul> <li>1.1. Electrical Energy: Voltage, Current, Power and Energy</li> <li>1.1.1. Voltage and Current</li> <li>1.1.2. Active, Reactive and Apparent Energy</li> <li>1.1.3. Electrical Power: Load Curves</li> </ul>	<ul><li>1.2. Energy Transformation</li><li>1.2.1. Power Transformers</li><li>1.2.2. Electricity Transportation</li><li>1.2.3. Electricity Distribution</li></ul>	<ul> <li>1.3. Electrical Energy Consuming Systems: Electric Engines</li> <li>1.3.1. Applications, Pumps, Fans and Compressors</li> <li>1.3.2. Frequency Inverters</li> <li>1.3.3. Motor-Driven Consumer Systems: Heat Pump Air Conditioning</li> </ul>	<ul><li>1.4. Other Electricity Consuming Systems</li><li>1.4.1. Joule Effect</li><li>1.4.2. Lighting</li><li>1.4.3. Direct Current Powered Systems</li></ul>
<ul><li>1.5. Electricity Billing</li><li>1.5.1. Legislation</li><li>1.5.2. Electricity Rates</li><li>1.5.3. Electricity Billing Term</li></ul>	<ul> <li>1.6. Units of Measurement of Fuel Consumption and their Transformation into Energy Units</li> <li>1.6.1. Energy Produced by Heat of Combustion: HHV and LLV</li> <li>1.6.2. Volumetric Measurements of Combustible Liquids</li> <li>1.6.3. Volumetric Measurements of Combustible</li> </ul>	Gases: Establishment and Calculation of Normal Conditions  1.7. Combustion Systems and Fuel Elements  1.7.1. Combustion Efficiency 1.7.2. Burners 1.7.3. Heat Transfer	<ul> <li>1.8. Boilers</li> <li>1.8.1. Calculation of Boiler Efficiency by Direct and Indirect Method</li> <li>1.8.2. Types of Heat Transfer Fluids</li> <li>1.8.3. Steam Boilers</li> </ul>
1.9. Other Fuel-Consuming Equipment 1.9.1. Ovens	<ul><li>1.9.2. Engines</li><li>1.9.3. Generating Sets</li><li>1.10. Fuel Billing</li></ul>	1.10.1. Legislation 1.10.2. Natural Gas Rates 1.10.3. Natural Gas Billing Terms	







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 26 | 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 28 | 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 | 29 **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.

### tech 30 | Methodology

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.



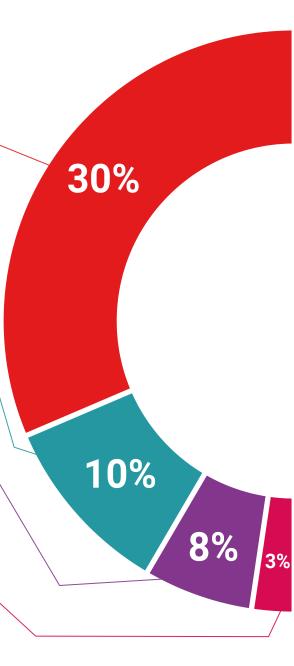
### **Management Skills Exercises**

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.

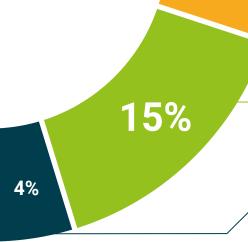


This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

#### **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.

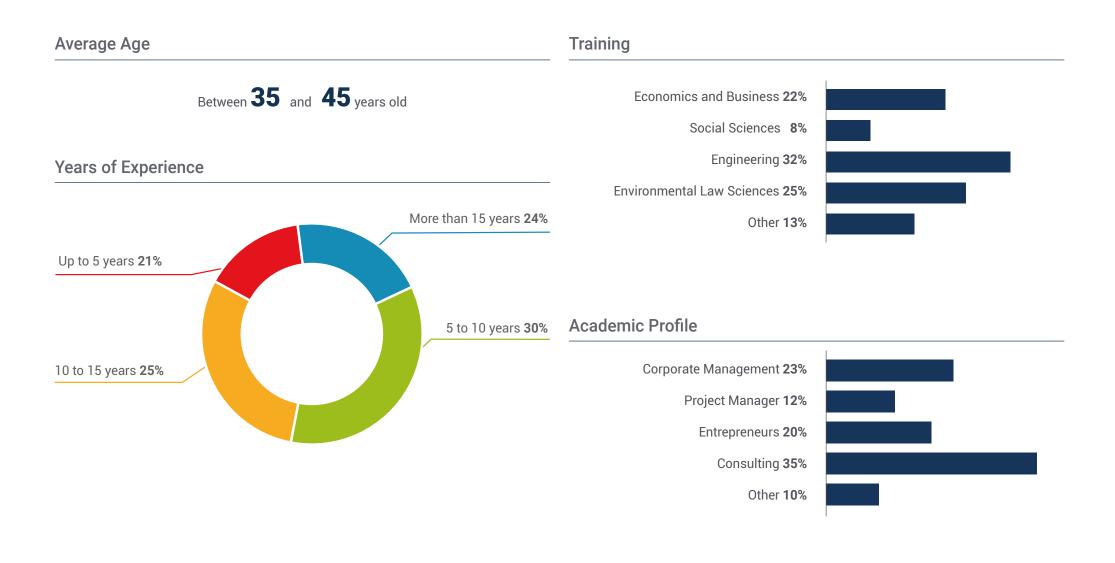


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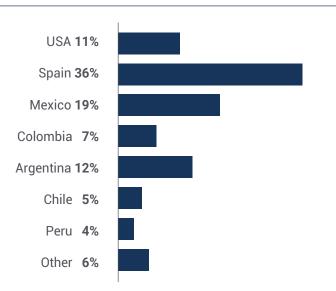




### tech 34 | Our Students' Profiles



### **Geographical Distribution**





### Pablo Menéndez

#### **Energy Consultant**

"I had been looking for a program that would allow me to get up to date on the main developments in electrical energy in organizations for some time, but I couldn't find one that met all my needs. Fortunately, this Postgraduate Certificate by TECH has been fundamental to improving my qualifications"





#### **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**.

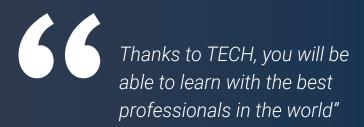
At the same time, she has actively participated in the energy policy of New York, related to the generation of renewable energy. To this end, she has collaborated in the volunteer program for the Regional Greenhouse Gas Initiative in this US state. The latter is based on the Cap and Trade model, which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



# 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.

#### 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.)

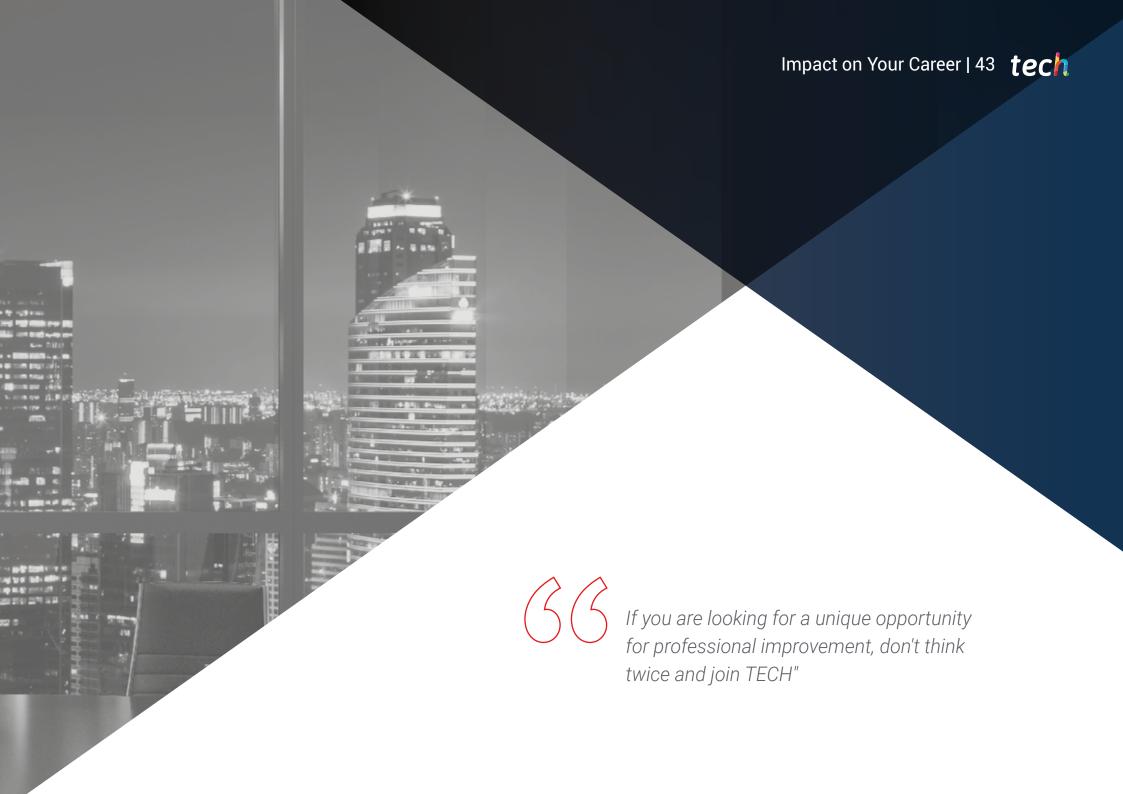
#### Ms. Granell García, Lilia

- 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





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

This Postgraduate Certificate in Electrical Energy in Organizations by TECH Global University is an intensive and highly valuable program aimed at improving students' professional skills in an area of extensive competition. Undoubtedly, it is a unique opportunity to improve professionally, but also personally, as it involves effort and dedication.

Those who wish to improve themselves, achieve a positive change at a professional level and interact with the best, will find their place at TECH.

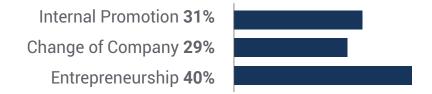
Achieve the professional change you seek thanks to this Postgraduate Certificate.

This Postgraduate Certificate is a unique learning opportunity to improve your knowledge in this field.

# 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 program will allow you to obtain your **Postgraduate Certificate in Electrical Energy in Organizations** 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 Electrical Energy in Organizations

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



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

#### Postgraduate Certificate in Electrical Energy in Organizations

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

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

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





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