

# Postgraduate Certificate

## Methodologies and Tools in the Environmental Management of Industry



## Postgraduate Certificate Methodologies and Tools in the Environmental Management of Industry

- » 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/methodologies-tools-environmental-management-industry](http://www.techtute.com/us/engineering/postgraduate-certificate/methodologies-tools-environmental-management-industry)

# Index

01

Introduction to the Program

---

p. 4

02

Why Study at TECH?

---

p. 8

03

Syllabus

---

p. 12

04

Teaching Objectives

---

p. 16

05

Study Methodology

---

p. 20

06

Teaching Staff

---

p. 30

07

Certificate

---

p. 34

# 01

# Introduction to the Program

In recent decades, environmental management in industry has gone from being a secondary concern to becoming a strategic priority. This is due to several factors: growing public awareness of environmental issues, stricter government regulations and the need to adopt sustainable practices in industrial production. Against this backdrop, TECH presents an innovative academic program that will allow engineers to acquire a comprehensive vision of industrial Environmental Management, from the identification of impacts and risks to the implementation of innovative technological solutions. This program is taught by recognized experts in the sector, through a 100% online academic itinerary and the most innovative pedagogical methodology: Relearning.



“

*With this 100% online TECH program, you will master the most advanced methodologies to manage the environmental impacts of industry and actively contribute to a more sustainable future”*



Environmental Management in industry refers to the application of methodologies, tools and strategies aimed at minimizing the negative impacts of industrial activities on the environment. This discipline integrates scientific, technological and ethical principles with the aim of promoting industrial development that respects ecological limits and contributes to social and economic well-being.

International bodies such as the United Nations and the International Labor Organization, together with global agreements such as the Paris Agreement on climate change, underline the importance of efficient and sustainable resource management in all areas of production. In this context, Industrial Environmental Management has established itself as a strategic area, where innovation, technology and continuous improvement are crucial to achieve sustainability.

For this reason, TECH launches a 100% online program, which provides professionals with comprehensive knowledge on the most effective methodologies and tools to address the main environmental challenges faced by industries. Throughout this academic journey, they will address key topics such as the identification of environmental impacts and factors, which allow them to assess and mitigate the negative effects of industrial processes. At the same time, they will delve into the use of environmental diagnostic tools, such as environmental audits and environmental impact assessments, which are essential for regulatory compliance and continuous improvement.

These contents will be taught through case studies, videos, interactive summaries, among other multimedia resources, available through a virtual platform. This teaching model, coupled with the innovative Relearning methodology, of which TECH is a pioneer, will allow graduates to acquire, in a short period of time, key skills in the management of natural resources within the industrial context, with emphasis on energy efficiency, emission reduction and industrial waste management.

This **Postgraduate Certificate in Methodologies and Tools in the Environmental Management of Industry** contains the most comprehensive and up-to-date educational program on the market. Its most notable features are:

- ♦ The development of case studies presented by experts in industrial sustainability, environmental management, green engineering and environmental policy
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*You will develop practical skills that will allow you to lead environmental management projects in strategic sectors such as the chemical industry, transportation and energy production"*

“

*You will be able to access the most cutting-edge content in Industrial Environmental Management with total freedom, 24 hours a day, setting your own pace of study and without limitations”*

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

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

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

*You will become an expert capable of implementing high-impact environmental management systems, aligned with the most demanding international regulations.*

*You will aspire to great work challenges thanks to an innovative and disruptive academic plan designed by recognized experts in the field of Environmental Engineering.*



02

# Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs, available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it has a huge faculty of more than 6,000 professors of the highest international prestige.





“

*Study at the largest online university in the world and ensure your professional success. The future begins at TECH”*

**The world's best online university, according to FORBES**

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

**Forbes**

The best online university in the world

The most complete  
**syllabus**

**The most complete syllabuses on the university scene**

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

**The best top international faculty**

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

**TOP**  
international faculty

The most effective methodology

**A unique learning method**

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

**The world's largest online university**

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.

**World's No.1**  
The World's largest online university

#### The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

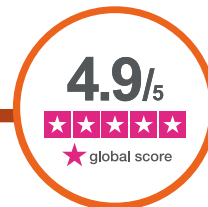
#### Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



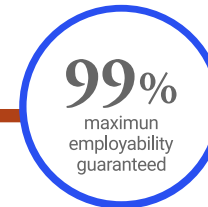
#### Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



#### The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



# 03 Syllabus

Throughout this program of studies, the most advanced methodologies for Environmental Management will be addressed, such as the identification of aspects and impacts, the implementation of environmental management systems, and the use of tools for continuous improvement. Professionals will also explore key topics such as product life cycle assessment, industrial waste management and international sustainability regulations. This academic path seeks to prepare engineers capable of integrating efficient environmental solutions into industrial processes, aligning with global best practices to contribute to sustainable development.







“

*You will have access to a curriculum designed following the latest trends and international standards in Environmental Management, which guarantees your preparation for the future of the industrial sector”*

## Module 1. Methodologies and Tools in the Environmental Management of Industry

- 1.1. Identification of Environmental Impacts and Factors
  - 1.1.1. Identification of Environmental Aspects and Impacts
  - 1.1.2. Impacts from Projects and Impacts from Operation
  - 1.1.3. Environmental Factors and Project Actions
- 1.2. Environmental Impact Assessment (I). Prior Studies
  - 1.2.1. Project Definition
  - 1.2.2. Identification of Potential Environmental Impacts
  - 1.2.3. Baseline Analysis
- 1.3. Environmental Impact Assessment (II). Methodology, Analysis and Reporting
  - 1.3.1. Environmental Impact Assessment Methodologies
  - 1.3.2. Identification and Analysis of Environmental Impacts: Leopold Matrix
  - 1.3.3. Preparation of Environmental Impact Reports with Mitigation Measures
- 1.4. Environmental Analysis Tools
  - 1.4.1. Life Cycle Assessment (LCA)
  - 1.4.2. Environmental Risk Assessment
  - 1.4.3. Environmental Cost-Benefit Analysis
- 1.5. Waste and Pollution Management
  - 1.5.1. Types of Industrial Waste
  - 1.5.2. Waste Reduction and Recycling Techniques
  - 1.5.3. Air and Water Pollution Control
- 1.6. Environmental Monitoring and Follow-Up
  - 1.6.1. Design of Environmental Monitoring Programs
  - 1.6.2. Environmental Data Sampling and Analysis Techniques
  - 1.6.3. Reporting and Communication of Monitoring Results







- 1.7. Environmental Risk Management Tools
  - 1.7.1. Identification and Evaluation of Environmental Risks
  - 1.7.2. Environmental Risk Analysis Methodology
  - 1.7.3. Strategies for the Mitigation and Control of Environmental Risk
- 1.8. Communication and Public Participation in Environmental Results
  - 1.8.1. Strategies for Environmental Communication
  - 1.8.2. Public Participation in Environmental Management
  - 1.8.3. Development of Strategies for Community Engagement
- 1.9. Environmental Economics and Finance
  - 1.9.1. Economic Analysis of Environmental Projects
  - 1.9.2. Financing of Environmental Projects
  - 1.9.3. Environmental Cost-Benefit Assessment
- 1.10. Environmental Data Analysis Tools
  - 1.10.1. Descriptive and Inferential Statistics
  - 1.10.2. Regression and Correlation Analysis
  - 1.10.3. Modeling and Simulation



*This comprehensive university program will prepare you to lead the transition to a more environmentally friendly industry, ensuring compliance with international regulations"*



# 04

# Teaching Objectives

Through this TECH Postgraduate Certificate, engineers will acquire key skills to apply environmental analysis methodologies, implement sustainable management systems and evaluate the life cycle of products. In addition, it will foster the ability to make informed decisions based on international environmental regulations, promote resource efficiency and waste management, and lead continuous improvement processes within industrial organizations. Upon completion of this program, professionals will be prepared to integrate innovative and strategic environmental solutions in the industrial environment, contributing to sustainability and regulatory compliance.







“

*You will implement effective environmental management strategies that improve efficiency and reduce the ecological impacts of industries significantly”*



## General Objectives

---

- ♦ Develop skills to identify and assess the environmental impacts generated by industrial activities
- ♦ Analyze and evaluate the life cycle of industrial products to identify sustainability improvement opportunities
- ♦ Propose innovative solutions for minimizing industrial waste and improving resource use efficiency
- ♦ Integrate circular economy practices into industrial processes to promote reuse and recycling
- ♦ Promote compliance with national and international environmental norms and regulations in industry
- ♦ Assess and manage environmental risks associated with new technologies and emerging industrial processes





### Specific Objectives

---

- ♦ Determine the technical aspects associated with the monitoring and control of emissions
- ♦ Identify the phases associated with waste management and the appropriate management measures
- ♦ Classify and properly manage effluents derived from the industrial operation
- ♦ Assess and quantify environmental risks and develop contingency plans



*You will develop successful environmental monitoring initiatives, ensuring air, water and soil quality in sustainable industrial projects”*



05

# Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.





“

*TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”*

### The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes  
(which you might not be able to attend)”*



### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“

*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”*



## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

*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.*



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"*

### The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



### The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

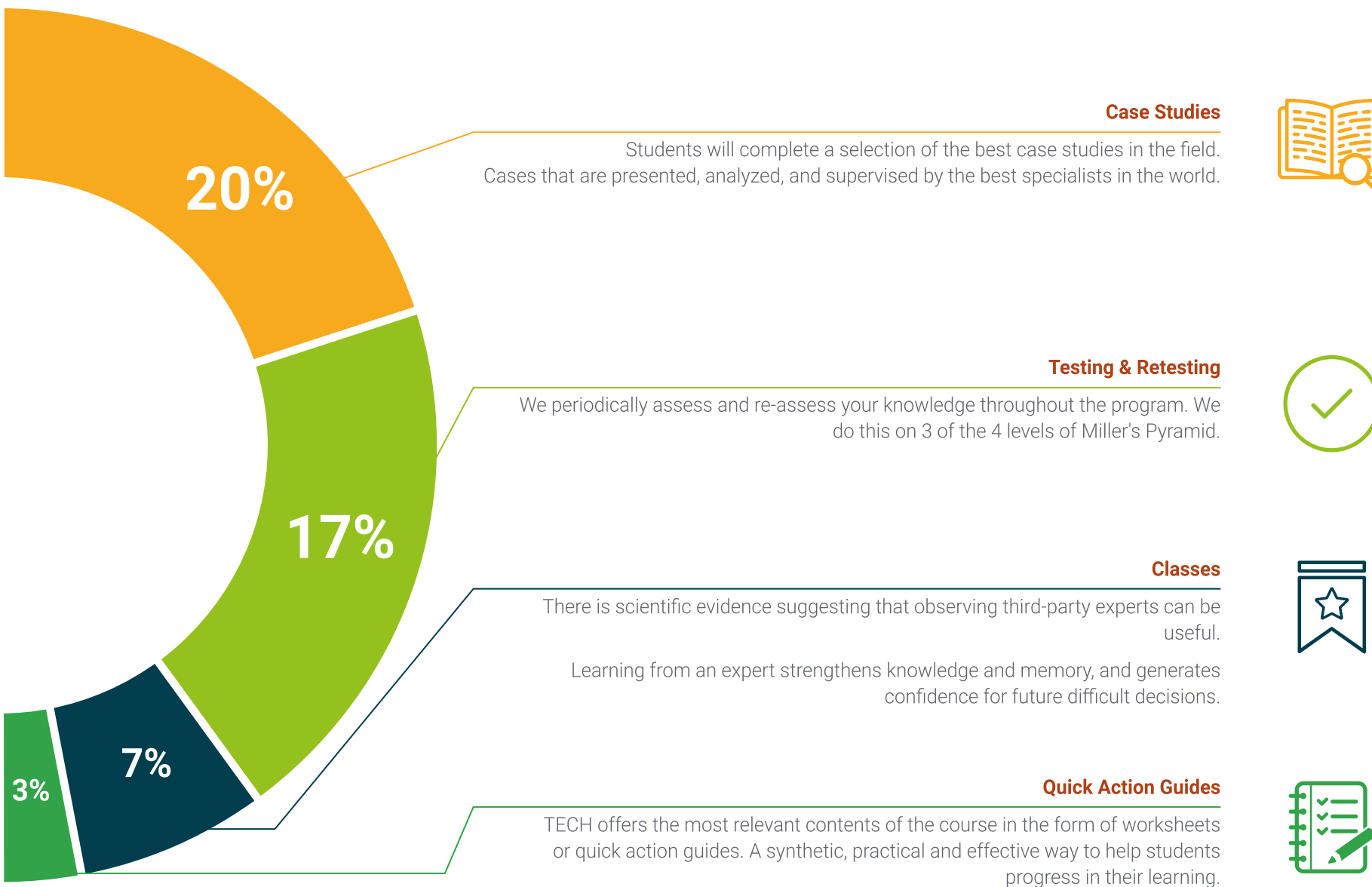
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.







06

# Teaching Staff

The teaching team of this Postgraduate Certificate is composed of highly qualified professionals with extensive experience in the field of Industrial Sustainability, Environmental Engineering and project management. These professionals combine their academic experience with a solid practical background, guaranteeing a comprehensive and updated preparation in the field. In addition, their pedagogical approach is based on the application of real and effective solutions, providing engineers with the necessary knowledge and skills to face the environmental challenges of the industrial sector.



“

*You will have the support of an outstanding teaching staff composed of renowned environmental engineers who will offer you a comprehensive and practical vision of the environmental sector in the industry”*

## Management



### Mr. Rettori Canali, Ignacio Esteban

- ♦ Product Safety Engineer at GE Vernova
- ♦ Sustainability Consultant at ALG-INDRA
- ♦ Product Safety Engineer at Alten
- ♦ HSE Data Analyst at MARS
- ♦ Logistics Shift Manager at Repsol YPF
- ♦ Environmental Analyst at Repsol YPF
- ♦ Environmental Specialist at the National Ministry of Environment
- ♦ Specialist in Energy Economics at the Polytechnic University of Catalonia
- ♦ Specialist in Renewable Energies and Electric Mobility, Polytechnic University of Catalonia
- ♦ Specialist in Energy Management from the National Technological University
- ♦ Specialist in Project Management, Liberty Foundation
- ♦ Specialist in Safety and Environment from the Catholic University of Argentina
- ♦ Degree in Environmental Engineering from the National University of Litoral





## Professors

### Mr. Martínez Ochoa, Silvio

- ♦ Specialist in Environmental Services Contracting at YPF
- ♦ Environmental Analyst at YPF
- ♦ Process Safety and Industrial Hygiene Analyst in YPF
- ♦ Quality Incident Analyst at Renault, Argentina
- ♦ Production Quality Manager at Motos Keller
- ♦ Specialist in Quality Engineering
- ♦ Specialist in Environmental Engineering
- ♦ Degree in Industrial Engineering from the National Technological University of Cordoba
- ♦ Degree in Labor Engineering from the National Technological University of La Plata

“

*All the teachers of this program have extensive experience, offering you an innovative perspective on the main advances in this field of study”*

07

# Certificate

The Postgraduate Certificate in Methodologies and Tools in the Environmental Management of Industry guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





“

*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 diploma for the **Postgraduate Certificate in Methodologies and Tools in the Environmental Management of Industry** 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 Methodologies and Tools in the Environmental Management of Industry**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



## Postgraduate Certificate Methodologies and Tools in the Environmental Management of Industry

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

# Postgraduate Certificate

## Methodologies and Tools in the Environmental Management of Industry

