

Postgraduate Certificate

The Environment in Industry



Postgraduate Certificate The Environment in 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/the-environment-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 years, the environmental impact of industry has been one of the greatest challenges globally, contributing significantly to greenhouse gas emissions, water pollution, and overexploitation of natural resources. Proper management of these impacts is not only essential for the preservation of the environment, but also to maintain business competitiveness. In this context, TECH has developed a comprehensive program that, in just six weeks of intensive study, provides engineers with the knowledge and tools necessary to implement responsible practices that ensure the conservation of the environment without compromising economic growth. All this, through a 100% online platform, flexible and without pre-established schedules.



“

A 100% online university program with which you will acquire key skills to manage natural resources and optimize industrial processes, making you a leader in sustainability within the sector”

The Environment in Industry encompasses all activities related to the protection of the natural environment in production processes. This includes natural resource management, pollution reduction, waste treatment, and optimization of water and energy use. Industries, responsible for a significant part of global environmental impacts, must take a proactive role in the transition to more sustainable production models. This approach not only improves the competitiveness and efficiency of companies, but also responds to growing pressure from regulations and social expectations.

International bodies such as the United Nations, the World Health Organization and the European Union are promoting regulatory frameworks and guidelines that encourage industry to reduce its environmental footprint. The adoption of policies such as the UN Sustainable Development Goals and the Paris Agreement, as well as the implementation of regulations such as ISO 14001, are fundamental steps in this direction.

In this context, TECH has designed a 100% online Postgraduate Certificate that offers professionals a comprehensive preparation in environmental management applied to industry. With the aim of addressing the challenges presented by industrial sustainability, this program provides the knowledge and skills necessary to effectively manage natural resources, waste and effluents in industrial processes, focusing on key issues such as ecological principles, circular economy, water and carbon footprint, as well as international regulations governing these practices.

Thanks to the fact that this program is taught through the innovative Relearning methodology, the engineer will be able to complete his specialization without the need to travel daily to a study center, accessing the contents from any device with an Internet connection. In the same way, they will enjoy teaching resources developed by active experts, providing an itinerary in tune with the latest advances in the sector.

This **Postgraduate Certificate in The Environment in Industry** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- ♦ The development of case studies presented by experts in industrial environmental management, sustainable technologies and international regulations
- ♦ The graphic, schematic and eminently practical content of the book provides scientific and practical information on those disciplines that are essential for professional practice
- ♦ Practical exercises where the process of 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



You will be able to implement innovative solutions for the treatment of contaminated water and soil, contributing to environmental restoration and compliance with international regulations”

“

You will acquire a comprehensive approach to resource management, ranging from responsible water use to the optimization of industrial processes”

The program's teaching staff includes professionals from the field who contribute their work experience to this educational 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 make strategic decisions based on data, which will allow you to apply sustainable development principles that boost competitiveness and reduce environmental impact.

You will have access to case studies and success stories that will allow you to apply the knowledge acquired in real situations, preparing you to face the current challenges of the industrial environment.



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.



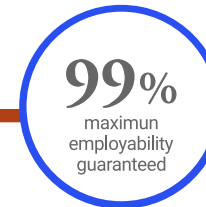
Google Premier Partner

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 course, engineers will explore the most relevant aspects of efficiently managing natural resources, waste, emissions and environmental impact, all within a framework of sustainability. With a practical approach, they will address key issues such as air, water and soil pollution, responsible energy use and strategies for reducing the environmental footprint. In addition, they will explore innovative technological solutions and current international regulations, preparing professionals to implement responsible industrial practices that optimize processes and favor the transition to a circular economy.





“

You will have a comprehensive curriculum that will allow you to delve into the fundamentals of environmental management in industry, acquiring key tools to implement sustainable solutions at every stage of the production cycle”

Module 1. The Environment in Industry

- 1.1. The Environment in Industry. Conceptual Framework
 - 1.1.1. Historical Evolution of the Relationship between Humankind and the Environment
 - 1.1.2. Key Principles of Environmental Management
 - 1.1.3. Importance of the Environment for Humankind
- 1.2. Ecology and Natural Resources
 - 1.2.1. Ecological Principles
 - 1.2.2. Types of Ecosystems and Biodiversity
 - 1.2.3. Energies: Renewable and Non-Renewable Sources
- 1.3. Waste, Effluents and Emissions
 - 1.3.1. Solid Waste
 - 1.3.2. Liquid Effluents
 - 1.3.3. Atmospheric Emissions
- 1.4. Soil Pollution
 - 1.4.1. Sources and Spread of Soil Contamination
 - 1.4.2. Contaminated Soil: Risks to the Population
 - 1.4.3. Technologies for Soil Treatment
- 1.5. Water Pollution
 - 1.5.1. Sources and Spread of Contamination in Surface Waters
 - 1.5.2. Spread of Contamination in Groundwater
 - 1.5.3. Contaminated Water
 - 1.5.3.1. Risks for the Population
 - 1.5.4. Water Treatment Technologies
- 1.6. Air Pollution
 - 1.6.1. Sources and Spread of Pollution in the Atmosphere
 - 1.6.2. Harmful Atmospheres
 - 1.6.2.1. Risks for the Population
 - 1.6.3. Technologies for the Treatment of Gaseous Effluents





- 1.7. Industrial Waste Management
 - 1.7.1. Industrial Waste Management
 - 1.7.1.1. Hazardous, Non-Hazardous and Recyclable
 - 1.7.2. Waste Treatment Methods
 - 1.7.2.1. Reduction, Reuse and Recycling
 - 1.7.3. Final Waste Disposal
 - 1.7.3.1. Landfills, Sanitary Landfills and Safety Landfills
- 1.8. Water Management in Industrial Processes
 - 1.8.1. Water Footprint: Calculation
 - 1.8.2. Efficient Use of Water in Industry: Reduction of Consumption and Optimization
 - 1.8.3. Wastewater Treatment: Treatment and Reuse Technologies
 - 1.8.4. Discharges and Water Quality: Controls
- 1.9. Energy Management and Emission Reduction
 - 1.9.1. Carbon Footprint. Calculation
 - 1.9.2. Energy Efficiency in Industry: Strategy and Technologies
 - 1.9.3. Greenhouse Gas Reduction. Renewable Energy Sources
 - 1.9.4. Emissions Monitoring and Reporting. Tools
- 1.10. Sustainable Development and Circular Economy
 - 1.10.1. Principles of Circular Economy. Life Cycle of Products and Materials
 - 1.10.2. Cleaner Production in Industry. Sustainable Processes and Waste Minimization
 - 1.10.3. Examples of Circular Economy Implementation. Success Stories

“You will master advanced tools to calculate the carbon footprint and the efficient use of water, becoming a professional capable of generating a positive impact on society”

04

Teaching Objectives

This Postgraduate Certificate aims to provide engineers with the necessary skills to effectively manage natural resources, waste and emissions in industrial processes. In this way, they will be able to apply sustainability principles, implement innovative technologies for effluent treatment and optimize the use of energy and water in industry. They will also acquire in-depth knowledge of international environmental regulations and develop strategies to reduce the carbon footprint and promote the circular economy within organizations.



“

*You will lead circular economy projects,
minimizing waste and optimizing the life
cycle of products in any organization”*



General Objectives

- ♦ Develop the key aspects of effective environmental impact reduction in industrial processes
- ♦ Determine the goals and objectives that a company's environmental policies should entail
- ♦ Analyze the successful methodologies for environmental management in the industrial environment
- ♦ Identify existing tools for environmental management in companies



You will develop key skills to manage projects that integrate sustainability, optimizing resources, reducing waste and improving the performance of industrial operations"





Specific Objectives

- ♦ Analyze the term Environment for the industrial field
- ♦ Analyze the methodologies for the identification and evaluation of environmental impacts
- ♦ Determine the types of treatment that exist for solid waste, liquid effluents and gaseous emissions
- ♦ Contextualize the concept of environmental management, pointing out its importance within the Integrated Management System (IMS) of the companies
- ♦ Identify the environmental management tools that companies have, highlighting their strengths and weaknesses
- ♦ Present and delve into the methodologies used in the measurement of environmental impact and management in the industrial field

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.

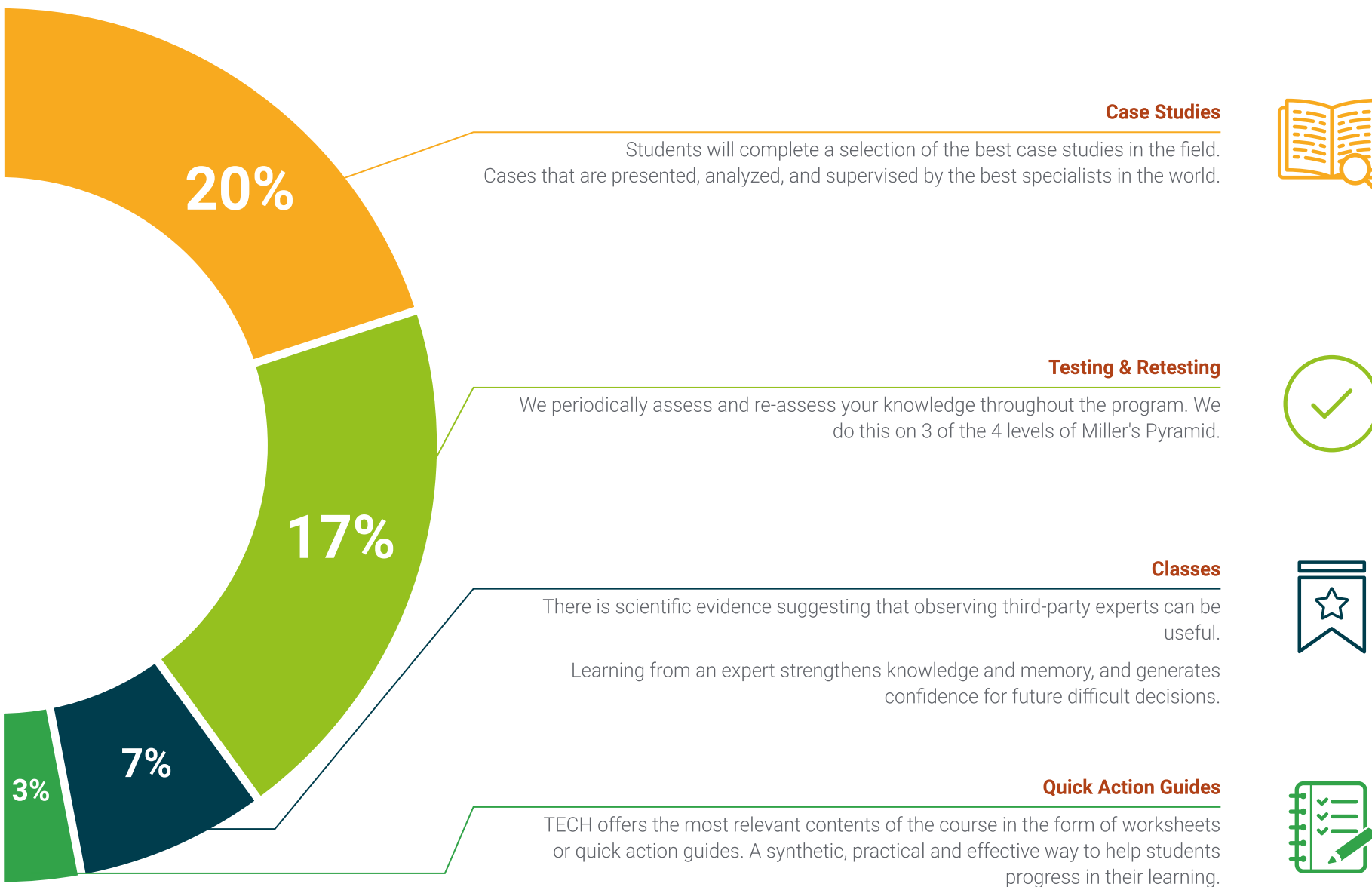
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 TECH Postgraduate Certificate is made up of renowned professionals with extensive experience in the field of industrial environmental management. With a practical and current approach, teachers combine their theoretical knowledge with their experience in the implementation of sustainable solutions in various industries. Through their teaching, engineers will be able to access up-to-date knowledge, acquire tools applicable to industrial reality and benefit from real cases that reflect the most recent challenges and advances in the sector.





“

A comprehensive program taught by a teaching staff composed of engineers with extensive experience in the industrial and environmental fields”

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. Barboza, Martín

- ♦ Environmental Field Supervisor at Trace Group
- ♦ Environmental Management and Training Coordinator at Techint Ingeniería y Construcción
- ♦ Environmental Supervisor at Tecpetrol S.A.
- ♦ Project Leader at Centro Ambiental y Derrames
- ♦ Degree in Environmental Engineering from the National University of Litoral
- ♦ Certified in Introduction to the ISO14001 Standard
- ♦ Expert in Environmental Impact Assessment

“

All teachers in 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 The Environment in Industry guarantees, in addition to the most accurate 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 The Environment in 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 The Environment in 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
online training
development languages
classroom



Postgraduate Certificate The Environment in Industry

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

Postgraduate Certificate

The Environment in Industry

