

Postgraduate Certificate Industry 4.0



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- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/artificial-intelligence/postgraduate-certificate/industry-4-0

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01

Introduction

According to a report by technology experts, the size of the Industry 4.0 market is expected to grow to \$241.58 billion over the next few years. Therefore, most companies in the production sector are adapting digital technology to improve and automate their tasks. In this sense, Artificial Intelligence brings companies a number of significant benefits. For example, its tools analyze large amounts of data in real time to identify patterns that improve manufacturing processes. Given these circumstances, TECH implements a pioneering university program that will delve into the digital transformation of the industry. In addition, it is taught in a flexible 100% online format, for greater student convenience.





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You will be able to build Smart Factories to optimize production flows thanks to this Postgraduate Certificate, based on the Relearning method ”

The rise of technologies has led to the emergence of Industry 4.0, which aims to take advantage of them to transform the production chain. In this way, organizations can improve their efficiency, flexibility and quality while remaining competitive in an ever-changing global market. An example of this is the Industrial Internet of Things, which serves to significantly optimize work processes by providing a digital infrastructure that results in more profitable and competitive operations. In this context, professionals require constant updating to incorporate the most disruptive technologies into their practice.

In view of this, TECH is developing a Postgraduate Certificate in Industry 4.0 aimed at specialists who wish to have a comprehensive vision of this technological field. The curriculum will delve into the characteristics of the digitalization of industry, as well as its different applications to organizations. Likewise, the syllabus will provide students with the steps to successfully deploy a Smart Factory, aimed at improving production through the integration of advanced digital technologies. In line with this, the didactic materials will delve into the current state of Industry 4.0, examining both its challenges and risks.

To strengthen the mastery of the contents, this university program applies the innovative Relearning system. TECH is a pioneer in the use of this teaching model, which promotes the assimilation of complex concepts through their natural and progressive reiteration. Also, the program uses material in various formats such as explanatory videos, interactive summaries and infographics. All this in a convenient 100% online modality, which allows each person to adjust their schedule to their responsibilities and availability. The only thing students will need to increase their knowledge is an electronic device with Internet access (cell phone, tablet or computer).

This **Postgraduate Certificate in Industry 4.0** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts in Digital Transformation and Industry 4.0
- The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential 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 stay at the forefront of Industry 4.0 trends to increase your competitiveness and identify business opportunities"

“

Looking to specialize in the Industrial Internet of Things? Achieve it with this program in just 6 weeks”

The program's teaching staff includes professionals from the sector who contribute their work experience to this 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 academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will gain practical skills that will allow you to implement innovative solutions to solve industrial problems.

Take advantage of all the benefits of the Relearning methodology, which will adapt to your schedule and pace of study.



02 Objectives

Through this program, graduates will understand the fundamentals of Industry 4.0 and the disruptive technologies that drive it. In this way, professionals will be qualified to implement these tools to a diversity of sectors, including supply chain management, predictive maintenance or process optimization. Therefore, students will transform any business facility into a Smart Factory in order to improve its efficiency. The program will also stimulate students' creativity, innovation and entrepreneurial spirit of the students. In this way, the specialists will develop new ideas to take advantage of the opportunities offered by the Fourth Industrial Revolution.



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You will broaden your professional horizons by becoming an Industry 4.0 expert. You will stand out in the technology sector!”



General Objectives

- ♦ Conduct a comprehensive analysis of the profound transformation and radical paradigm shift being experienced in the current global digitalization process
- ♦ Provide in-depth knowledge and the necessary technological tools to face and lead the technological leap and the challenges currently present in companies
- ♦ Mastering the digitalization procedures of companies and the automation of their processes to create new fields of wealth in areas such as creativity, innovation and technological efficiency
- ♦ Leading Digital Change



Achieve your most ambitious goals with TECH's didactic tools, including explanatory videos and interactive summaries"





Specific Objectives

- Analyze the origins of the so-called Fourth Industrial Revolution and the Industry 4.0 concept
- In-depth study of the key principles of Industry 4.0, the technologies on which they are based and the potential of all of them in their application to the different productive sectors
- Convert any manufacturing facility into a *Smart Factory* and be prepared for the challenges and challenges that come with it
- Understand the impact of Industry 4.0 on society, the economy and employment, as well as the ethical and legal challenges associated with the implementation of these technologies

03

Course Management

Loyal to its philosophy of providing high quality education, TECH carries out a rigorous selection process to choose the teachers that make up its university programs. Therefore, for this Postgraduate Certificate, TECH offers students a group of professionals in Artificial Intelligence and Industry 4.0. This teaching team will be responsible for transmitting their solid knowledge to the students, through top quality teaching materials. In addition, they will take advantage of their extensive work experience in these fields to provide students with personalized advice and resolve any doubts that may arise during the learning process.





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Register now and learn from the best professionals in Industry 4.0 about its development and application"

Management



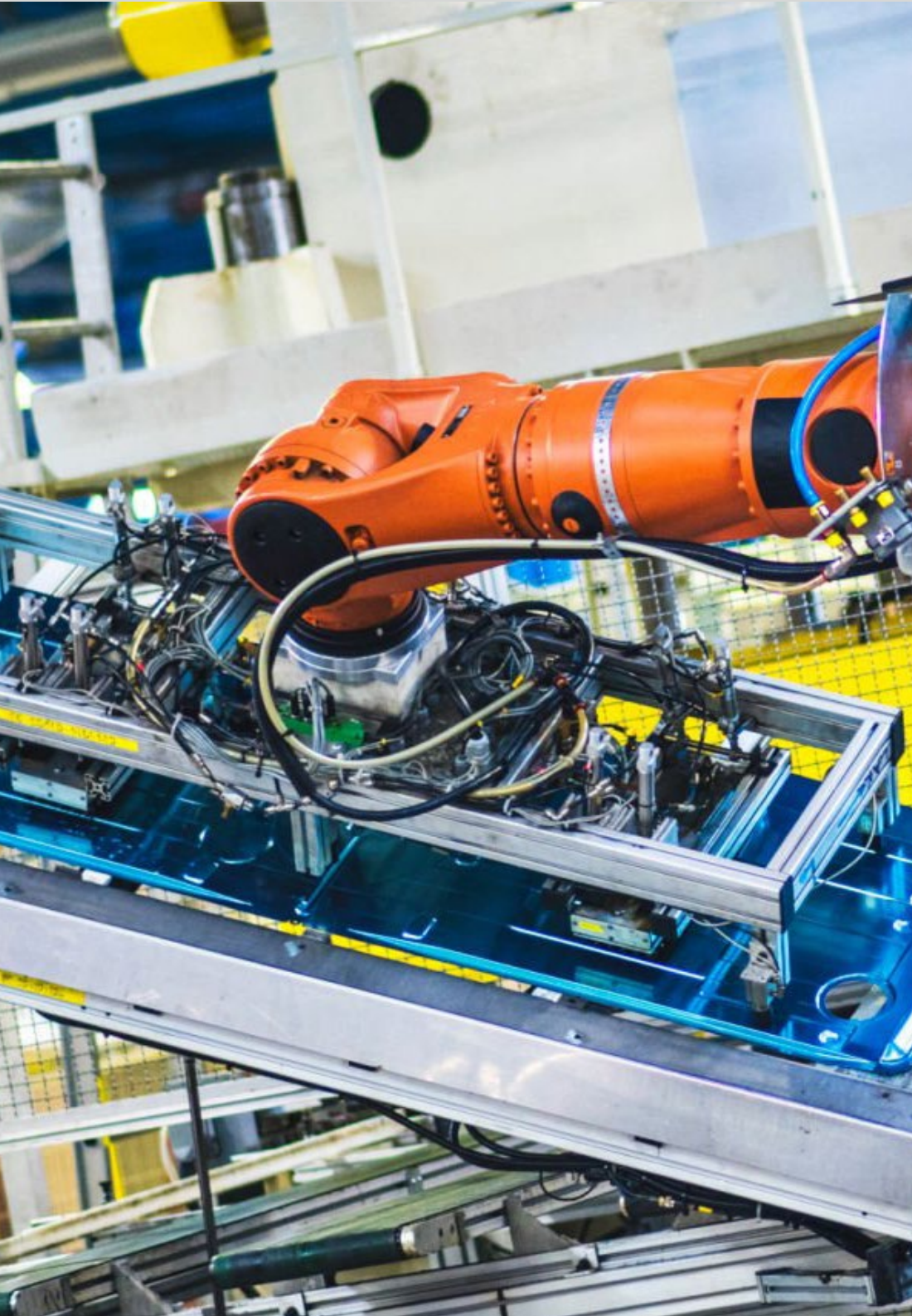
Dr. Segovia Escobar, Pablo

- ♦ Chief Executive of the Defense Sector in the Company TecnoBit of the Oesía Group
- ♦ Corporate Project Director Indra
- ♦ Master's Degree in Companies Administration and Management by the National University of Distance Education
- ♦ Postgraduate in Strategic Management Function
- ♦ Member of: Spanish Association of People with High Intellectual Quotient



Dr. Diezma López, Pedro

- ♦ Chief Innovation Officer and CEO of Zerintia Technologies
- ♦ Founder of the technology company Acuilae
- ♦ Member of the Kebala Group for business incubation and promotion
- ♦ Consultant for technology companies such as Endesa, Airbus or Telefónica
- ♦ Wearable "Best Initiative" Award in eHealth 2017 and "Best Technological "Solution" 2018 for occupational safety



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Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"

04

Structure and Content

This academic pathway will provide graduates with a solid understanding of the enabling technologies that underpin Industry 4.0. To this end, the syllabus will delve into issues such as the digital transformation of industry, the main disruptive technologies or their applications to the work environment. In this way, students will use the Industrial Internet of Things to collect data, monitor processes, improve efficiency and optimize decision-making. The program will also address the principles of the Smart Factory, so that students can create more optimal production environments.

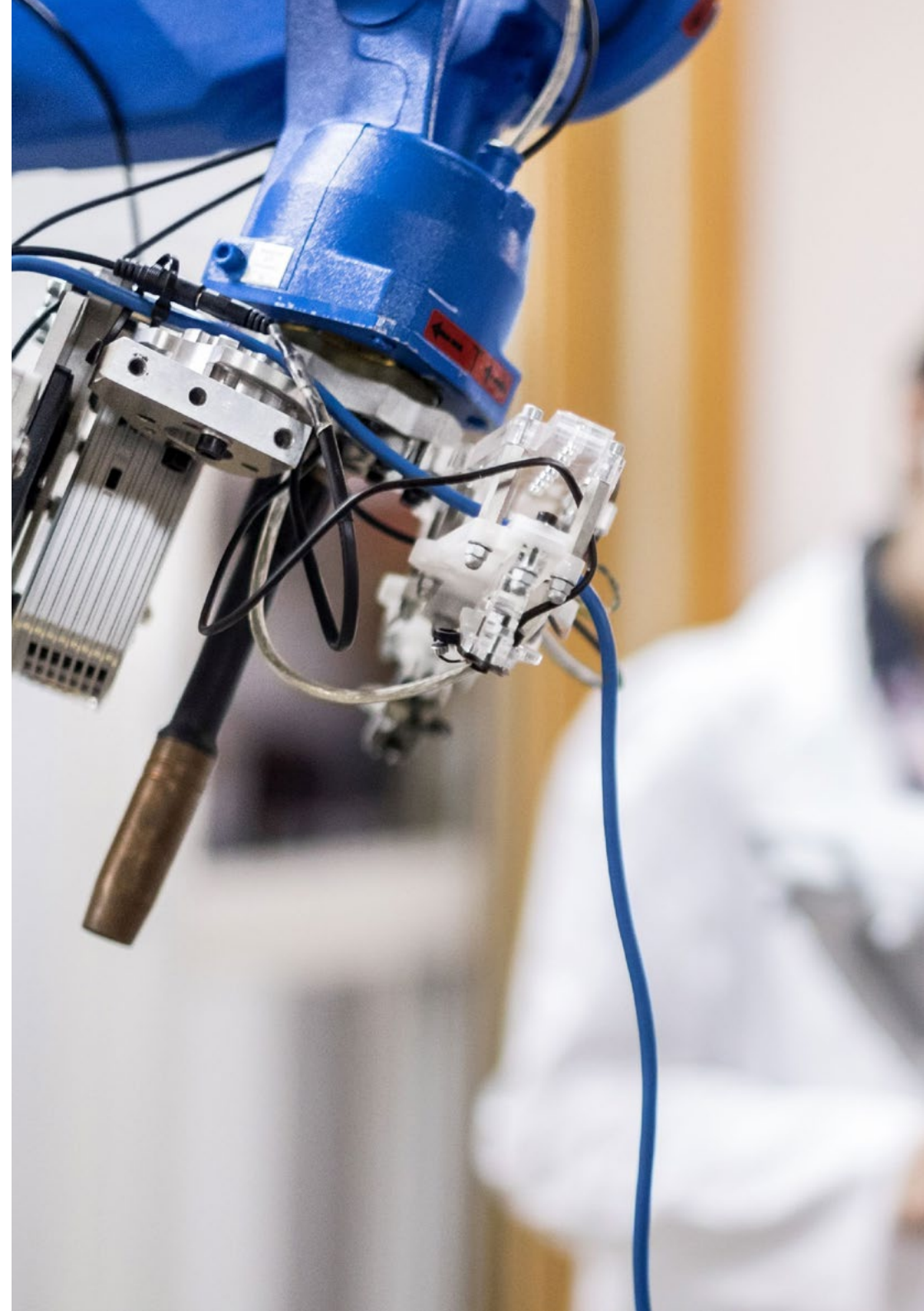


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A high-level faculty will introduce you to the barriers to the implementation of Industry 4.0 so that you can successfully overcome them"

Module 1. 4.0. Industry

- 1.1. Definition of 4.0. Industry
 - 1.1.1. Features
- 1.2. Benefits of the 4.0. Industry
 - 1.2.1. Key Factors
 - 1.2.2. Main Advantages
- 1.3. Industrial Revolutions and Vision of the Future
 - 1.3.1. Industrial Revolutions
 - 1.3.2. Keys Factors in Each Revolution
 - 1.3.3. Technological Principles as a Basis for Possible New Revolutions
- 1.4. The Digital Transformation of the Industry
 - 1.4.1. Characteristics of the Digitization of the Industry
 - 1.4.2. Disruptive Technologies
 - 1.4.3. Applications in the Industry
- 1.5. Forth Industrial Revolution. Key Principles of Industry 4.0.
 - 1.5.1. Definitions
 - 1.5.2. Key Principles and Applications
- 1.6. 4.0. Industry and Industrial Internet
 - 1.6.1. Origin of IIoT
 - 1.6.2. Operation
 - 1.6.3. Steps to Follow for its Implementation
 - 1.6.4. Benefits
- 1.7. Smart Factory Principles
 - 1.7.1. The Smart Factory
 - 1.7.2. Elements that Define a Smart Factory
 - 1.7.3. Steps to Deploy a Smart Factory



- 1.8. Status of the 4.0. Industry
 - 1.8.1. Status of the 4.0. Industry in Different Sectors
 - 1.8.2. Barriers to the Implementation of 4.0. Industry
- 1.9. Challenges and Risks
 - 1.9.1. SWOT Analysis
 - 1.9.2. Challenges
- 1.10. Role of Technological Capabilities and the Human Factor
 - 1.10.1. Disruptive Technologies in Industry 4.0.
 - 1.10.2. The Importance of the Human Factor Key Factor

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The specialized readings of TECH will allow you to further extend the rigorous information provided in this Educational Experience"

05

Methodology

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.





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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

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.

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



You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.



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

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. 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 professional reality is taken into account.

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

The case method has been the most widely used learning system among the world's leading Information Technology 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 that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

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.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



Practising Skills and Abilities

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



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Case Studies

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 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

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.



06

Certificate

The Postgraduate Certificate in Industry 4.0 guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



The image features two black graduation caps (mortarboards) against a bright blue sky with light, wispy clouds. The caps are positioned diagonally, with one in the foreground and another slightly behind it. The background is split into a blue upper half and a white lower half by a diagonal line. The 'tech' logo in the top right corner has the letters 't', 'e', and 'c' in blue, and 'h' in red.

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Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Postgraduate Certificate in Industry 4.0** contains the most complete and up-to-date program on the market.

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

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

Title: **Postgraduate Certificate in Industry 4.0**

Official N° of Hours: **150 h.**



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

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



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