

# Postgraduate Certificate Leadership in Industry 4.0





## Postgraduate Certificate Leadership in Industry 4.0

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

Website: [www.techtute.com/in/information-technology/postgraduate-certificate/leadership-industry-4-0](http://www.techtute.com/in/information-technology/postgraduate-certificate/leadership-industry-4-0)

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# 01

# Introduction

Industrial companies, as a result of digitization, require accurate technological innovation and optimal process automation to achieve competitive success. To do so, the leaders of these companies must have not only skills in managing teams and complex situations, but also the ability to integrate ICT and advanced analytics into the business. Because of this, TECH has created this program, which provides the student with the knowledge required to efficiently lead industrial organizations towards the digital transition. 100% online and from the comfort of your own home, you will delve into the essential technologies of Industry 4.0 and gain the skills to implement them within your company.



Order Pick Time  
07:49

Order Pick Time  
09:28

Order Pick Time  
12:05

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*Be able to apply and lead technological innovation in industrial production through this TECH Postgraduate Certificate"*

Industrial activity has undergone significant advances in recent years, integrating new digital technologies into the production processes of goods. In this way, tools such as Artificial Intelligence, the Industrial Internet of Things or Robotics are increasingly present in the companies of the sector, offering a relevant reduction of working times and optimizing their productivity. Given the benefits they offer, more and more companies are opting to undertake a digital transformation. To do this successfully, they need leaders with high organizational and technological skills.

For this reason, TECH has opted to design this complete program, which provides students with the most advanced skills to lead the process of technological innovation in the industry. Throughout this educational period, you will delve into the future of digital production systems or delve into the architecture of the Smart Factory. In addition, you will assimilate the skills required to lead a digital transformation project in the industrial field.

Since this program is delivered 100% online, students will manage their own study time to achieve fully effective learning. You will also benefit from a wide range of didactic materials available in the form of complementary readings, explanatory videos and self-assessment exercises. In this way, you will be able to choose the formats that best suit your particular educational needs.

This **Postgraduate Certificate in Leadership 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 Technology Project Management
- ♦ The graphic, schematic and eminently practical contents of the book provide practical information on those 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



*Through this program, you will explore the future of digital production systems in order to face the challenges of the industrial sector"*

“

*The 100% online mode of delivery of this Postgraduate Certificate will allow you to learn without leaving your home”*

The program's teaching staff includes professionals from the sector who bring their work experience to this program, in addition to renowned specialists from prestigious reference societies and 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 educational year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Throughout this educational path, you will master the operation and know the ins and outs of each area of the Smart Factory.*

*Become a professional capable of leading the digital transformation processes of industrial companies in 6 weeks.*



# 02 Objectives

The design of this Postgraduate Certificate has been carried out with the premise of providing the student with a complete specialization in leadership applied to Industry 4.0. In this way, you will acquire a series of competencies that will prepare you to manage different projects related to this professional field. All this, in only 6 weeks of learning and from the hand of the best specialists in the field.





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*In just 150 hours, you'll gain a set of skills that will boost your chances of leading large projects in Industry 4.0."*



## General Objectives

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- ◆ 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





## Specific Objectives

- ◆ Understand the current virtual era and its leadership capacity, on which the success and survival of digital transformation processes involving any type of industry will depend
- ◆ Develop, from all available data, the Digital Twin of the facilities/systems/assets integrated in an IoT network
- ◆ Analyze the architecture that makes up a Smart Factory

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*Achieve your desired educational and professional growth with the study facilities that TECH Technological University offers”*



03

# Course Management

With the idea in mind to guarantee the high educational level of its academic programs, TECH has selected leading experts in project management linked to Industry 4.0 to teach this program. All these specialists have accumulated extensive experience in leading technology companies, holding important positions in them. Consequently, the knowledge offered to the students will be fully applicable in their professional careers.





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*Specialize in Leadership in Industry 4.0 with professionals with experience in the management and development of technological projects”*

## Management



### Mr. Segovia Escobar, Pablo

- Chief Executive of the Defense Sector in the Company TecnoBit of the Oesía Group
- Project Manager at Indra
- Master's Degree in Business Administration and Management from the National University of Distance Education
- Postgraduate in Strategic Management Function
- Member of the Spanish Association of People with High Intellectual Quotient



### Mr. Diezma López, Pedro

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



# 04

## Structure and Content

The syllabus of this program has been developed with the intention of providing students with the most cutting-edge and relevant knowledge in the field of Industry 4.0, giving them the necessary skills to carry out an accurate leadership in this field. This learning will be done by means of didactic materials available in formats such as readings, explanatory video or interactive summary. Thanks to this, and in a 100% online mode, the student will obtain a pleasant and individualized teaching.







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*Enjoy a syllabus designed in detail by specialists with extensive professional experience in the field of Industry 4.0"*

## Module 1. Leading Industry 4.0

- 1.1. Leadership Abilities
  - 1.1.1. Leadership Factors in the Human Factor
  - 1.1.2. Leadership and Technology
- 1.2. Industry 4.0 and the Future of Production
  - 1.2.1. Definitions
  - 1.2.2. Production Systems
  - 1.2.3. Future of Digital Production Systems
- 1.3. Effects of Industry 4.0
  - 1.3.1. Effects and Challenges
- 1.4. Essential Technologies in Industry 4.0
  - 1.4.1. Definition of Technologies
  - 1.4.2. Characteristics of Technologies
  - 1.4.3. Applications and Impacts
- 1.5. Digitization of Manufacturing
  - 1.5.1. Definitions
  - 1.5.2. Benefits of the Digitization of Manufacturing
  - 1.5.3. Digital Twins
- 1.6. Digital Capabilities in an Organization
  - 1.6.1. Development Digital Capabilities
  - 1.6.2. Understanding the Digital Ecosystem
  - 1.6.3. Digital Vision of the Business
- 1.7. Architecture Behind a Smart Factory
  - 1.7.1. Areas and Operations
  - 1.7.2. Connectivity and Security
  - 1.7.3. Case Uses
- 1.8. Technology Markers in the Post-Covid Era
  - 1.8.1. Technological Challenges in the Post-Covid Era
  - 1.8.2. New Case Uses





- 1.9. The Era of Absolute Virtualization
  - 1.9.1. Virtualisation
  - 1.9.2. The New Era of Virtualization
  - 1.9.3. Advantages
- 1.10. Current Situation in Digital Transformation Gartner Hype
  - 1.10.1. Gartner Hype
  - 1.10.2. Analysis of Technologies and Their Status
  - 1.10.3. Data Exploitation

“*Enroll in this Postgraduate Certificate to study through state-of-the-art didactic formats such as the explanatory video or the interactive summary*”

# 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 Leadership 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.



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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 Leadership 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 certificate 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 Leadership in Industry 4.0**

Official N° of Hours: **150 h.**



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



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