Postgraduate Certificate

Industry 4.0 Services and Solutions

tech technological university

Postgraduate Certificate
Industry 4.0 Services and Solutions

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

Website: **www.techtitute.com/in/information-technology/postgraduate-certificate/industry-4-0-services-solutions**

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01
Introduction

The primary and secondary sectors, thanks to technological advances, are increasingly using cutting-edge digital tools to facilitate daily tasks and achieve greater productive precision. In this way, IT specialists in the digitization sector are currently in great demand by many companies, as they are responsible for designing and implementing software that helps to optimize their activity. Faced with this situation, this academic institution has created this program, which allows students to delve into the development of technological solutions for areas such as agriculture, livestock and construction. In a 100% online mode and without depending on tight schedules, you will be prepared to perform with solvency in a demanded field of work.

This Postgraduate Certificate will prepare you to apply the best digitization strategies in different areas of the primary and secondary sector"

The Industrial Internet of Things, Big Data or Artificial Intelligence are cutting-edge technologies that have had a huge impact on areas such as agriculture, livestock, construction or industry in recent years. Through their use, companies can predict market behavior or perform everyday tasks more quickly and with fewer resources. As a result, more and more companies in the primary and secondary sectors are opting to implement technological tools in their activities. To undertake this process and choose those that best suit their needs, they need the best IT specialists in digital solutions for the sector.

That is why TECH has designed this Postgraduate Certificate, in order to provide students with a series of competencies that will help them to increase their professional prospects in this sought-after field. During 150 hours of intensive learning, they will delve into the development of a roadmap for business digitalization and learn the key factors for undertaking technological transformation in each area of the primary sector. In addition, it will explore the ins and outs of digital solutions for the energy, construction and industrial sectors.

All this, following an innovative 100% online methodology that allows the computer scientist to learn without the need to make uncomfortable daily trips to a study center. You will also benefit from the most complete didactic contents in the educational panorama, which are presented in state-of-the-art multimedia formats, among which the explanatory video, the interactive summary and the evaluative tests stand out. In this way, we guarantee an education adapted to the personal and academic needs of each student.

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

- Practical cases presented by experts in digital Transformation
- 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

Thanks to this program, you will be able to draw up a roadmap for the digitization of companies in the agricultural, construction and industrial sectors"

Study from anywhere in the world and at the desired time thanks to the 100% online modality of this educational program.

Analyze, through this program, the key factors in the digitization of companies in the energy, livestock or mining sectors.

" Increase your competencies in the application of digital solutions for companies with professionals who are actively practicing in this area"

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 educational year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02
Objectives

TECH's Postgraduate Certificate in Industry 4.0 Services and Solutions has been developed to offer students a complete specialization in this field. Through 6 weeks of exhaustive learning, they will delve into the particularities of digitalization in both the primary and secondary sectors. In addition, they will do so while enjoying the most innovative teaching methodology in the pedagogical panorama.

Boost your career as an IT professional by specializing in digital solutions for the primary and secondary sector"
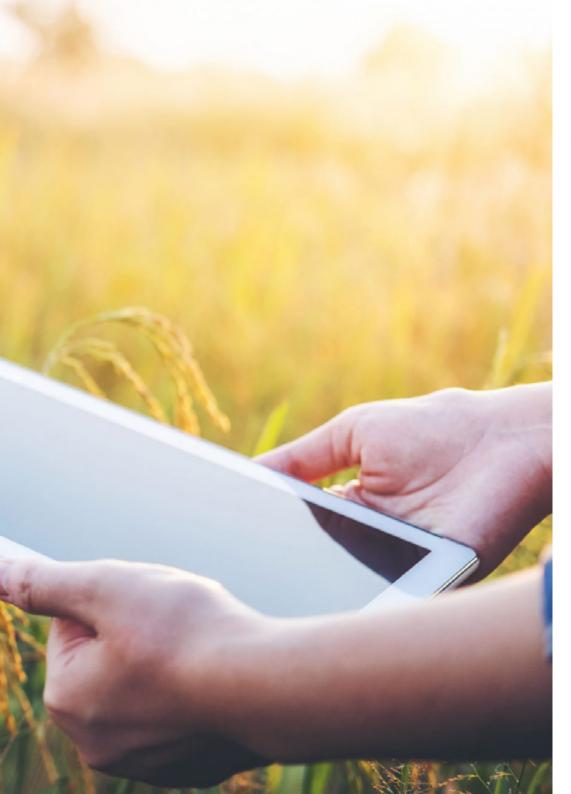
General Objectives

- 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

- Master 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

With this program, learn about the applications of Artificial Intelligence in sectors such as livestock, mining or construction"

Specific Objectives

- Entering the world of robotics and automation

- Choose a robotic platform, prototype and know in detail simulators and robot operating system (ROS)

- Delve into the applications of Artificial Intelligence to robotics aimed at predicting behavior and optimizing processes

- Study robotics concepts and tools, as well as use cases, real examples and integration with other systems and demonstration

- Analyze the most intelligent robots that will accompany humans in the coming years and how humanoid machines will be trained to perform in complex and challenging environments

03
Course Management

In order to preserve the exquisite academic level that characterizes TECH's programs, this Postgraduate Certificate is directed and taught by experts with extensive experience in software solutions for companies. In this way, they have provided their services to relevant companies in different sectors of activity, among which Telefónica, Endesa or Airbus stand out. Because of this, all the knowledge that the students will assimilate will have a complete professional applicability.

"From the hand of experts in software solutions that work for the most cutting-edge companies in this field"
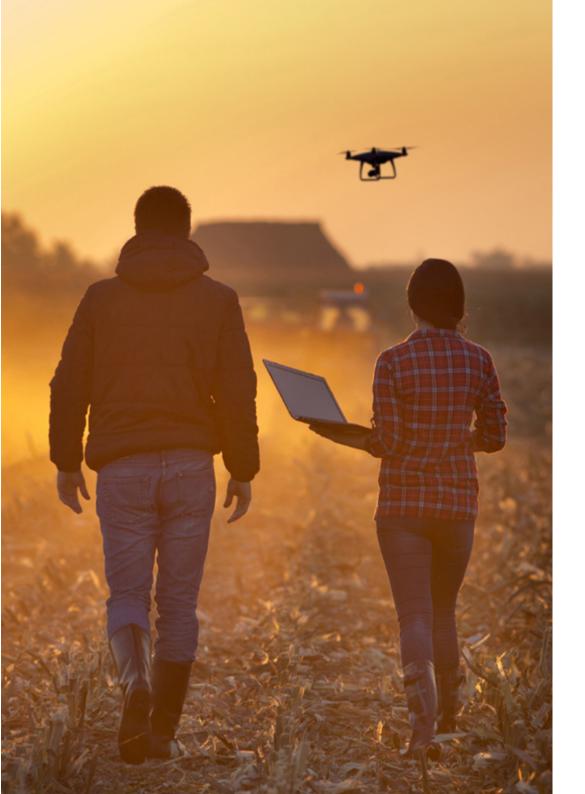
Management

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

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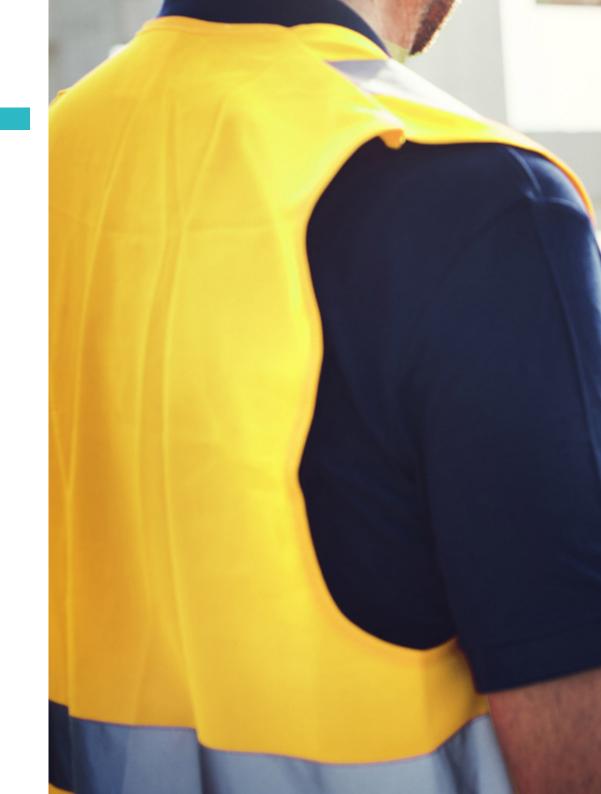
Structure and Content

The syllabus of this Postgraduate Certificate has been created to provide the computer scientist with the most advanced knowledge on Industry 4.0 Services and Solutions. All the didactic contents available to the student throughout this program are presented in formats such as the explanatory video, the interactive summary or the self-evaluation exercises. In this way, and through a 100% online methodology, the student will enjoy a completely enjoyable, effective and individualized teaching.

The Relearning system of this program will allow you to learn at your own pace, without external teaching limitations"

Module 1. Industry 4.0 Services and Solutions I

1.1.   Industry 4.0 and Business Strategies
    1.1.1.   Factors of Business Digitalization
    1.1.2.   Roadmap for Business Digitalization
1.2.   Digitalization of Processes and the Value Chain
    1.2.1.   Value Chain
    1.2.2.   Key Steps in the Digitization of Processes
1.3.   Sector Solutions Primary Sector
    1.3.1.   The Primary Economic Sector
    1.3.2.   Characteristics of Each Subsector
1.4.   Digitization of the Primary Sector: *Smart Farms*
    1.4.1.   Main Characteristics
    1.4.2.   Keys Factors of Digitization
1.5.   Digitization of the Primary Sector: Digital and Intelligent Agriculture
    1.5.1.   Main Characteristics
    1.5.2.   Keys Factors of Digitization
1.6.   Sector Solutions Secondary Sector
    1.6.1.   The Secondary Economic Sector
    1.6.2.   Characteristics of Each Subsector
1.7.   Digitization of the Secondary Sector: *Smart Factory*
    1.7.1.   Main Characteristics
    1.7.2.   Keys Factors of Digitization
1.8.   Digitization of the Secondary Sector: Energy
    1.8.1.   Main Characteristics
    1.8.2.   Keys Factors of Digitization
1.9.   Digitization of the Secondary Sector: Construction
    1.9.1.   Main Characteristics
    1.9.2.   Keys Factors of Digitization
1.10.   Digitization of the Secondary Sector: Mining
    1.10.1.   Main Characteristics
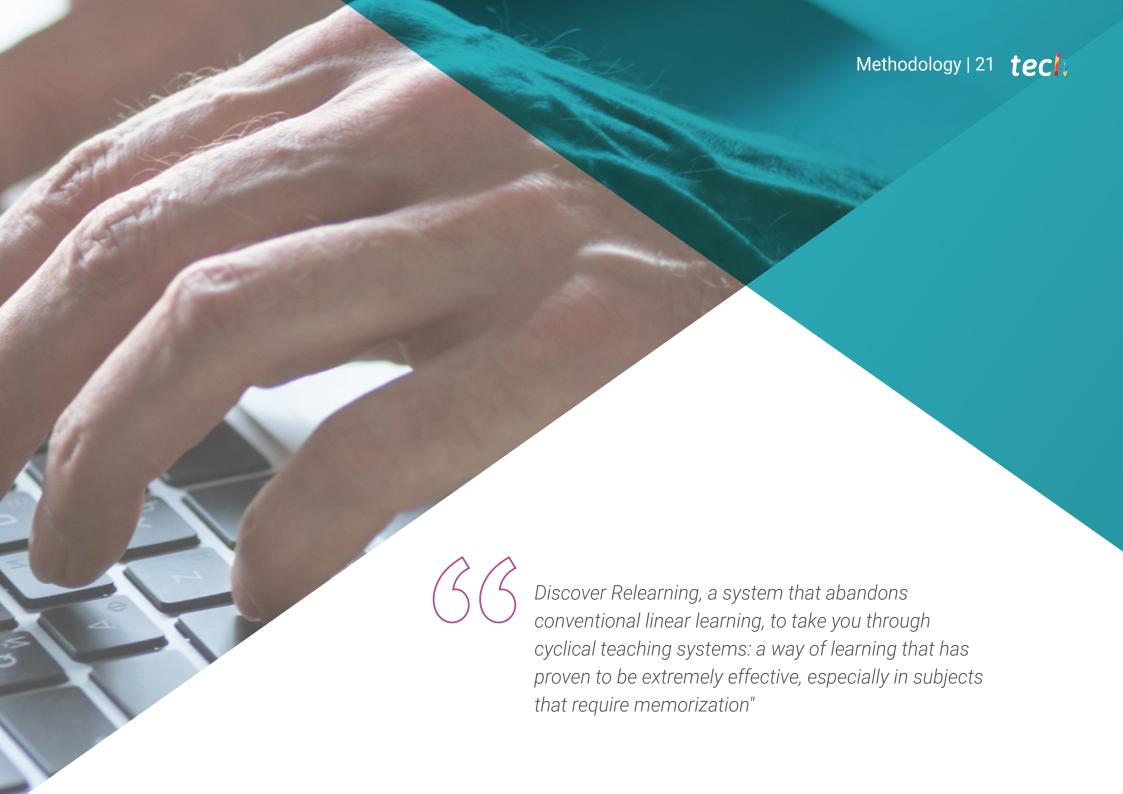   1.10.2.   Keys Factors of Digitization

Get the most up-to-date knowledge on Industry 4.0 Services and Solutions by enrolling in this Postgraduate Certificate"

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.

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.

"

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.

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.

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

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

30%

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.

10%

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.

8%

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.

20%

25%

4%

3%

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

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 Services and Solutions** 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 Industry 4.0 Services and Solutions**

Official Nº of Hours: **150 h.**

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Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE CERTIFICATE
in

Industry 4.0 Services and Solutions

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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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