Postgraduate Certificate
Industry 4.0

tech technological university

Postgraduate Certificate
Industry 4.0

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

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

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01
Introduction

Technological advances have driven the digital revolution in industry, resulting in the implementation of tools that facilitate the daily work of workers and increase business productivity. In this way, instruments such as Big Data or the Industrial Internet of Things are excellent allies for optimizing decision-making or interconnecting different areas of the company and improving its performance. Because of this, computer scientists specialized in the design and development of these technologies enjoy high career prospects, which is why TECH has created this program. Throughout the program, you will delve into the keys of the Fourth Industrial Revolution or detect the procedures to generate a Smart Factory, specializing in this demanded field in a 100% online mode.

With this program, learn about the different applications of new technologies in the industry to optimize all areas of a factory and boost its business productivity"

In recent years, industry has begun to experience a fourth revolution characterized by the implementation of innovative digital tools that favor the creation of intelligent processes within the factory. In this line, these advances have made possible the interconnection of supply systems or the implementation of Virtual Reality, favoring an optimization of production costs and increasing the efficiency of the work performed. Given the benefits offered by these technologies, their adoption is increasing by companies, so that computer specialists in their implementation and management are more and more needed nowadays.

For this reason, TECH has designed this program, through which students will learn the ins and outs of Industry 4.0 to promote their professional growth in this sector. Throughout this educational path, you will identify the most relevant technological applications within the industrial sector or detect the protocols to be drawn to implement the Industrial Internet of Things in the factory. They will also be able to establish the most appropriate strategies for analyzing the digital challenges that a company in this field can take on.

Since this program is taught by means of a 100% online methodology, the computer scientists will be able to obtain effective learning while managing their own time as they wish. Likewise, didactic materials will be available in formats such as readings, explanatory videos or interactive summaries. With this, TECH aims to provide its students with learning that is completely adapted to their study preferences.

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 technological solutions focused on the industrial field
- 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 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

Thanks to this Postgraduate Certificate, you will identify the procedures required to implement the Industrial Internet of Things in the industrial environment"

Ensure a first class and completely enjoyable learning experience through didactic content available in the form of video or self-assessment tests.

Through this program, you will detect the most sophisticated tools to analyze the challenges and technological challenges that a factory can and must assume.

" *This Postgraduate Certificate has a 100% online methodology that will allow the student to obtain a resolute learning without depending on uncomfortable and tight schedules"*

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

The design of this Postgraduate Certificate has been carried out with the premise of providing the student with the most relevant and cutting-edge knowledge about Industry 4.0 in only 150 hours. During the educational journey, you will delve into the digitalization process that the industry has undergone and in which it is currently immersed, or learn about the tools needed to optimize the technological transformation of the industry. In addition, this learning will be preserved by the fulfillment of the following general and specific objectives.

Increase your career prospects in Industry 4.0 thanks to the knowledge that this TECH program will offer you"

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
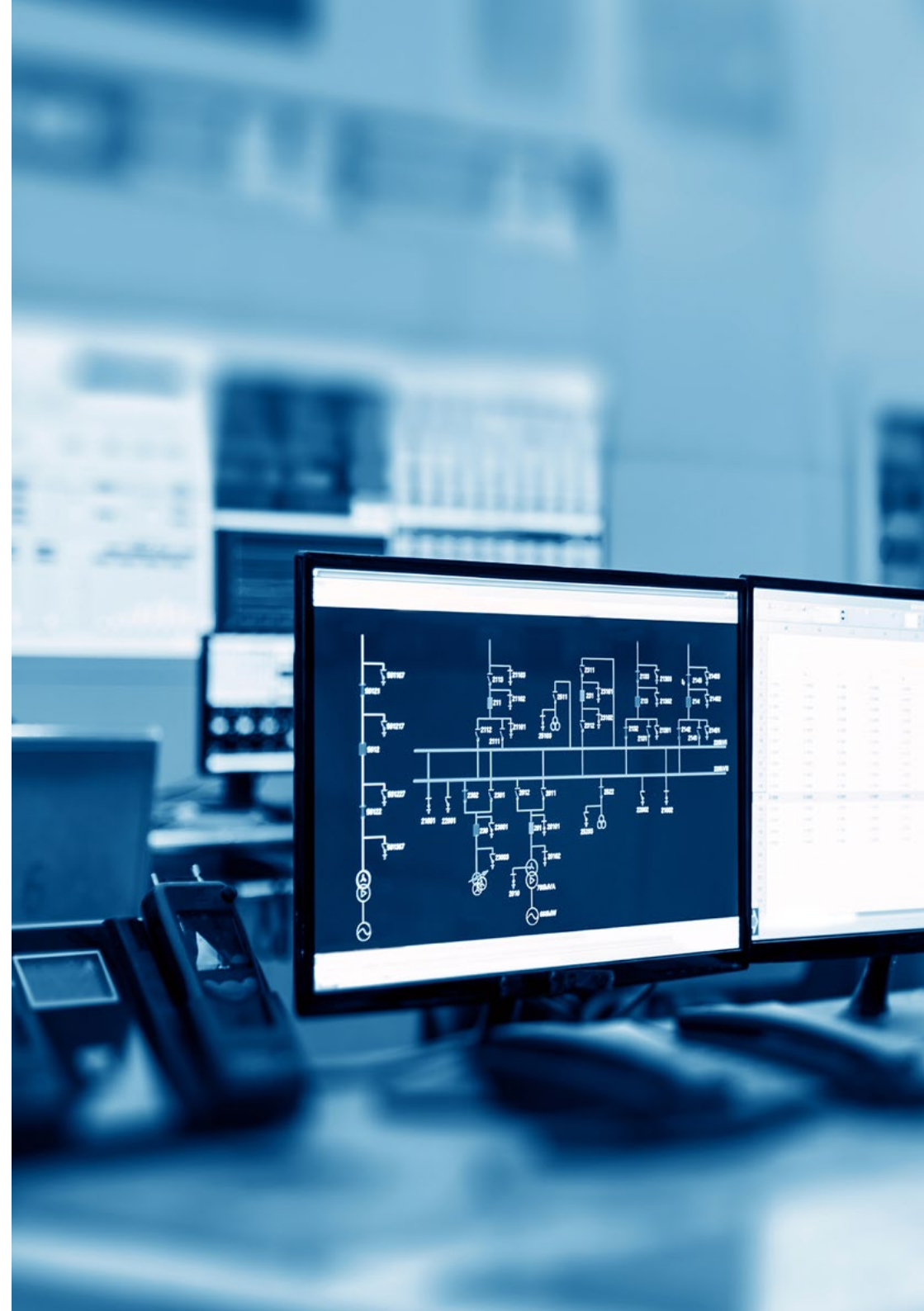
Specific Objectives

◆ 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

Throughout this educational itinerary, you will delve completely into the digital transformation process in which the industrial sector is currently immersed"

03
Course Management

In order to provide students with top-quality educational programs, this TECH program is directed and taught by the best professionals linked to the Industry 4.0 area, specialized in technological solutions for this field. These experts are themselves responsible for developing the teaching resources available throughout this educational experience. Therefore, all the contents that will be provided to the computer scientist will be fully applicable in the workplace.

This program is directed and taught by experts who are actively developing their functions in Industry 4.0, so the knowledge they will provide you with will be completely up-to-date"

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: 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

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Structure and Content

The syllabus of this program consists of 1 module with which the student will delve and increase their knowledge on the most relevant aspects related to Industry 4.0. All the didactic materials that you will enjoy during the duration of this program are available in formats such as the readings, the explanatory video or the interactive summary. Thanks to this and through a 100% online methodology, the computer scientists will acquire an education completely adapted to their educational and personal needs.
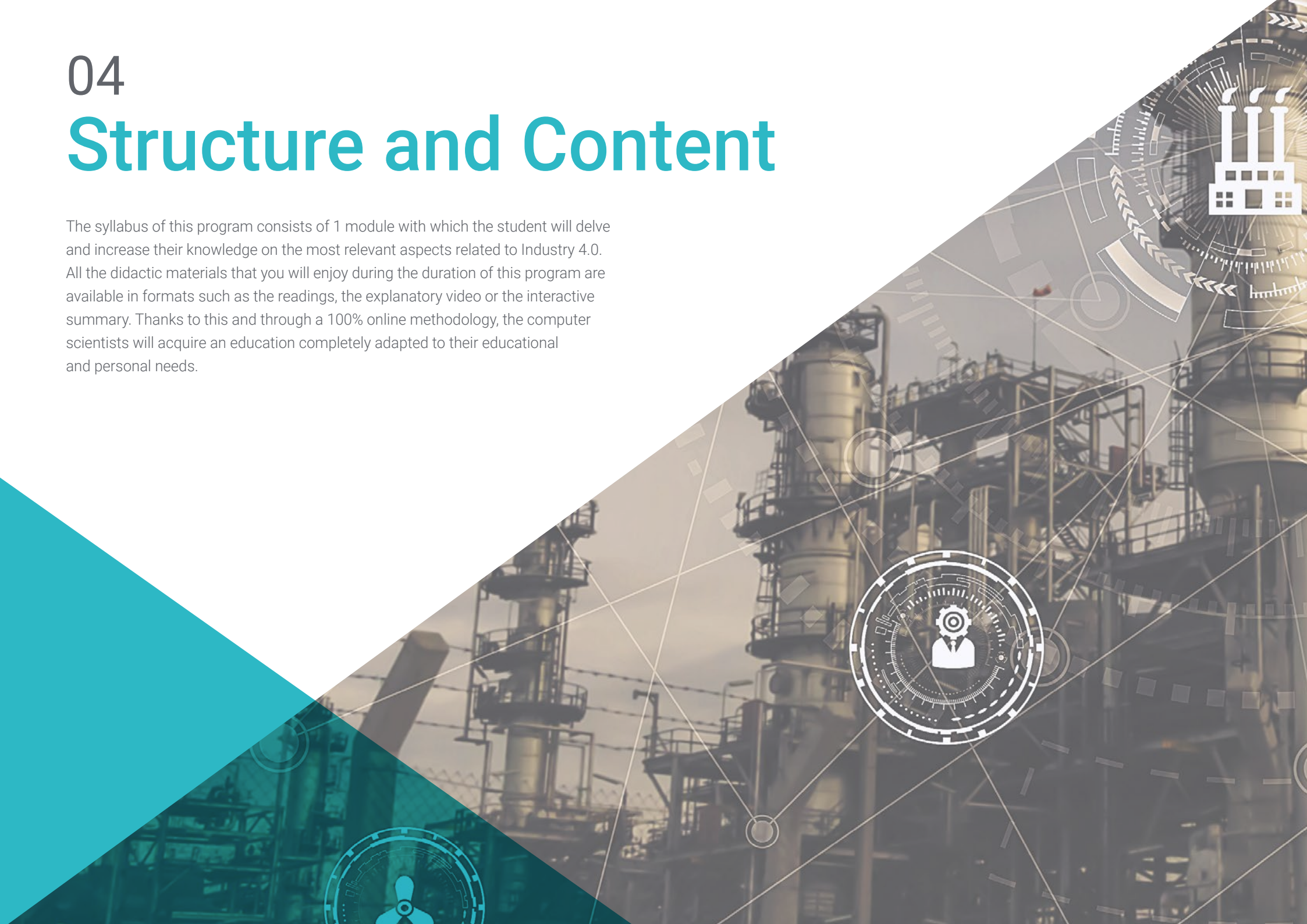
This syllabus has been designed by top experts in the field of Industry 4.0 to provide you with the most cutting-edge teaching resources in the field"

Module 1. Industry 4.0

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 IoT

    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.   Smart Factory

    1.7.2.   Elements That Defiine a Smart Factory

    1.7.3.   Steps to Deploy a Smart Factory

Enroll in this program and enjoy the possibility of learning in an effective way and adapted to your study preferences through a variety of textual and multimedia didactic formats"

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.

" *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.

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.

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.

30%

10%

8%

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 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** 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 Nº of Hours: **150 h.**

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

POSTGRADUATE CERTIFICATE
in

Industry 4.0

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 diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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