# Postgraduate Certificate
## Industrial Production

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# Postgraduate Certificate
## Industrial Production

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

Website: www.techtitute.com/us/design/postgraduate-certificate/industrial-production

# Index

01

# Introduction

In order to properly use all types of utilities and technology, it is important to possess in-depth knowledge of Industrial Production. This has been one of the most important areas in the field of product development for years and offers numerous career opportunities. This program was created in response to this situation, and it will enable designers to delve into aspects such as quality control, continuous flow manufacturing or reverse engineering. All this with the best multimedia resources, arranged within the best educational technology and a 100% online teaching methodology that adapts completely to the students' circumstances.

*Thanks to this program, you can delve into the Industrial Production process, integrating knowledge into your work that will immediately improve all your designs"*

For designers focused on product development, understanding the processes involved in industrial production is essential to improve their creations. This knowledge will not only improve the aesthetics of the creations, rather, it will also increase the efficiency of the manufacturing process. For this reason, many companies in the industrial sector are looking for professionals who specialise in this area who can work in a mass production environment.

This way, this Postgraduate Certificate provides the students with a series of competencies and skills with which they will be able to obtain great opportunities in this field of work. You will, therefore, be able to follow a syllabus that contains the latest developments in design considerations for assembly, manufacturing by consolidation or automation of manufacturing processes and numerical control (NC) programming.

The online methodology used in the program allows professionals to study whenever and wherever they wish, without schedules or travel. With 24-hour access to all teaching materials, presented in multimedia format: videos, classes, interactive summaries or activities, among many others.

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

- Practical cases presented by experts in Industrial Design
- The graphic, schematic, and practical contents with which they are created, provide scientific and 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

*Industrial Design is one of the most demanded professional fields and with this Postgraduate Certificate you have the opportunity to specialize and differentiate yourself as a specialist in this area"*

*This program is developed in a 100% online format that will allow you to balance your professional and personal life with your studies. No schedules and no need to travel"*

*The most cutting-edge educational resources will be at your disposal: videos, activities, practical case, interactive summaries, etc.*

*Techniques such as consolidation fabrication and solid cutting will be within your reach when you complete this qualification.*

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

02

# Objectives

The main objective of this program is to introduce the designer to the fundamental principles of industrial production. This way, you will be able to improve your own creations, taking into account manufacturing techniques and materials. And to achieve this goal, TECH will provide you with the most advanced content in this field, while offering you a cutting-edge learning methodology that can be adapted to your personal and professional circumstances.

*Improve your products and cut costs by learning the most advanced Industrial Production techniques in this Postgraduate Certificate"*

## General Objectives

- Learn to plan, develop and present artistic productions appropriately, using effective production strategies and with their own creative contributions
- Acquire theoretical and practical methodological knowledge necessary for the realization of technical projects
- Analyze and evaluate materials used in engineering based on their properties
- Deepen knowledge in the innovation and technology transfer processes for the development of new products and processes and the establishment of a new state of the art

*Access the best professional opportunities thanks to this program, structured to respond to the current needs of today's labor market"*

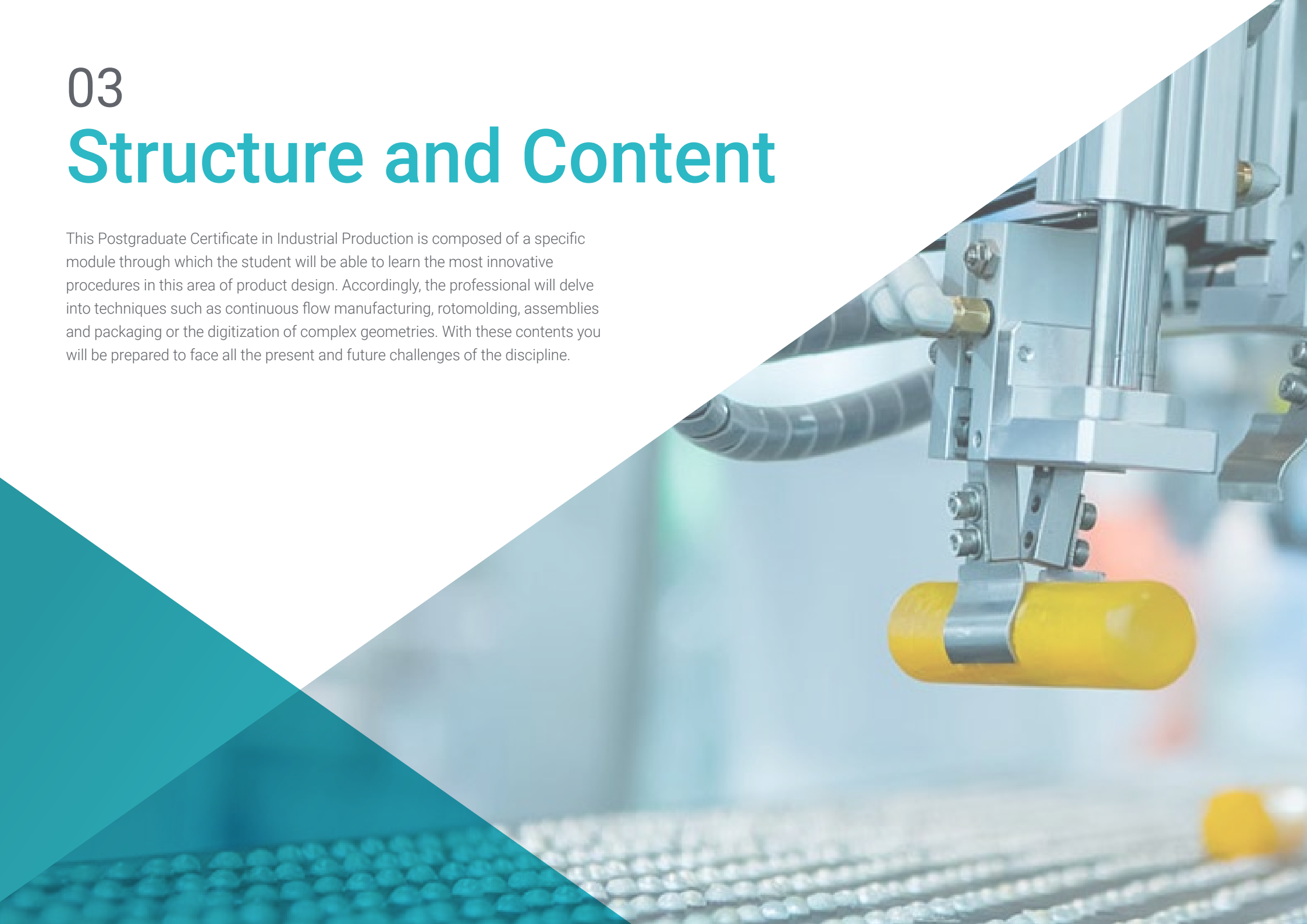
## Specific Objectives

- Know the basic physical principles and execution of the different manufacturing processes
- Learn the most common instruments used for longitudinal measurements in mechanical manufacturing, including constructive and metrological characteristics
- Adapt the methodology and requirements definition according to the application for which the procedure is intended
- Elaborate approximations of the abstract world of the project to the real world, by means of two-dimensional and virtual graphic presentation in three dimensions, using specific software

03

# Structure and Content

This Postgraduate Certificate in Industrial Production is composed of a specific module through which the student will be able to learn the most innovative procedures in this area of product design. Accordingly, the professional will delve into techniques such as continuous flow manufacturing, rotomolding, assemblies and packaging or the digitization of complex geometries. With these contents you will be prepared to face all the present and future challenges of the discipline.



*The most complete and up-to-date program is now within your reach so that you can improve your professional prospects by delving into the processes of Industrial Production"*

## **Module 1.** Industrial Production

1.1. Manufacturing Technology
- 1.1.1. Introduction
- 1.1.2. Evolution of Manufacturing
- 1.1.3. Classification of the Manufacturing Processes

1.2. Solids Cutting
- 1.2.1. Handling of Panels and Sheets
- 1.2.2. Continuous Flow Manufacturing
- 1.2.3. Deformities

1.3. Manufacture of Thin and Hollow Shapes
- 1.3.1. Rotomolding
- 1.3.2. Blowing
- 1.3.3. Comparison

1.4. Manufacturing by Consolidation
- 1.4.1. Complex Techniques
- 1.4.2. Advanced Techniques.
- 1.4.3. Textures and Superficial Finishings

1.5. Quality Controls
- 1.5.1. Metrology
- 1.5.2. Adjustments
- 1.5.3. Tolerances

1.6. Assembly and Packaging
- 1.6.1. Constructive Systems
- 1.6.2. Assembly Processes
- 1.6.3. Design Considerations for Assembly

1.7. Post Fabrication Logistics
- 1.7.1. Storage
- 1.7.2. Expedition
- 1.7.3. Waste
- 1.7.4. Post-Sales Service
- 1.7.5. Final Management




1.8. Introduction to Numerical Control
- 1.8.1. Introduction to CAM Systems
- 1.8.2. CAM Solution Architectures
- 1.8.3. Functional Design of CAM Systems
- 1.8.4. Automation of Manufacturing Processes and NC Scheduling
- 1.8.5. CAD-CAM Integration Systems

1.9. Inverse Engineering
- 1.9.1. Digitalization of Complex Geometries
- 1.9.2. Geometry Processing
- 1.9.3. Compatability and Edition

1.10. Lean Manufacturing
- 1.10.1. Lean Thinking
- 1.10.2. Waste in the Company
- 1.10.3. The 5 S

*This qualification combines the most innovative teaching methodology with the most comprehensive content: you won't find a better program"*

04

# 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.*

*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 is the most widely used learning system in the best faculties in the world. 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies 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

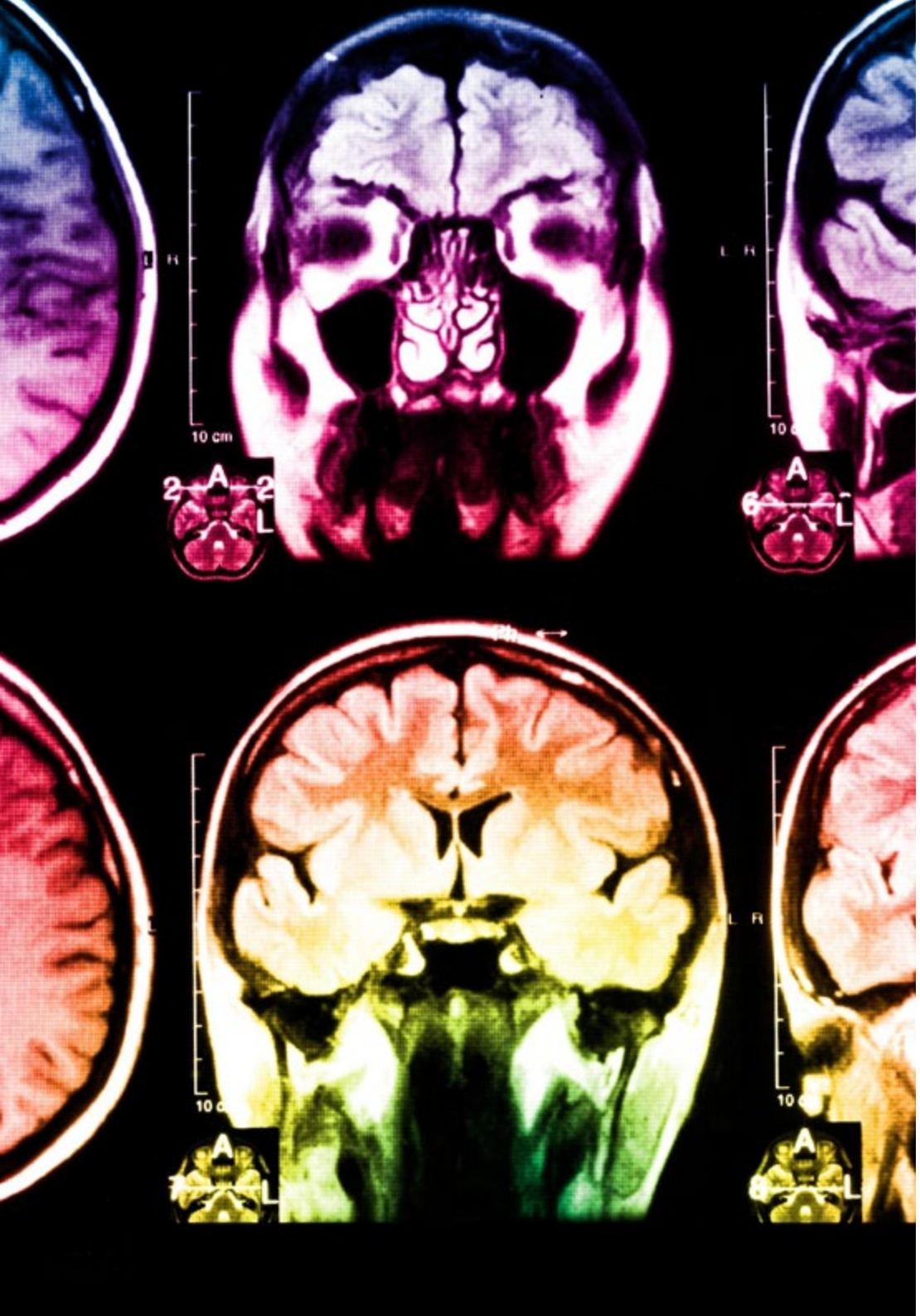
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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. With this methodology we have 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, markets, and financial 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.

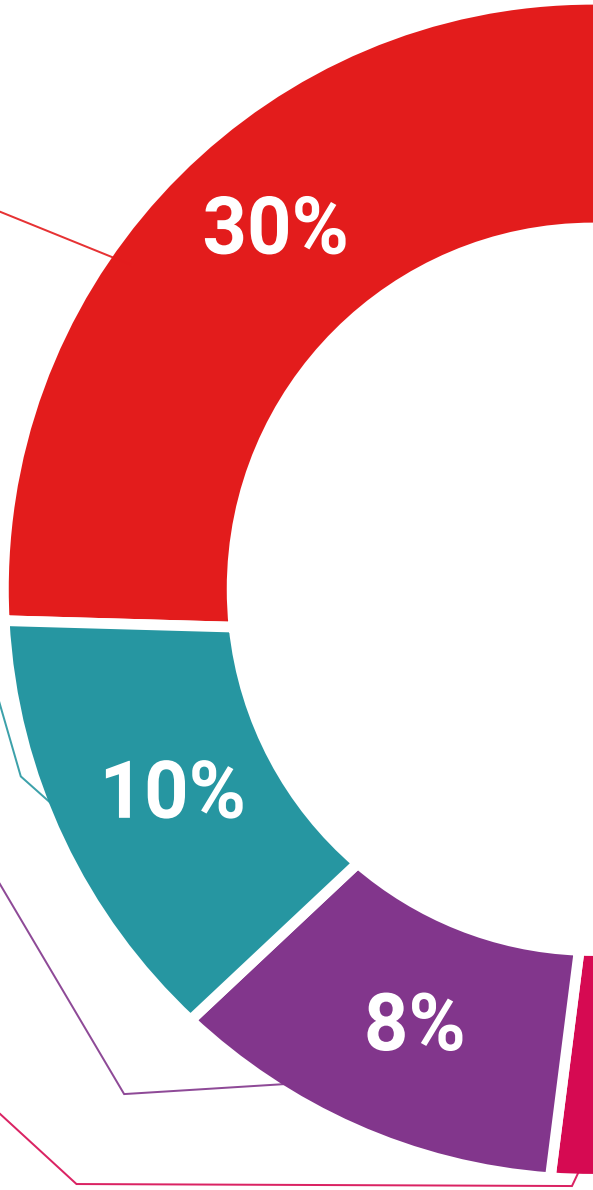
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

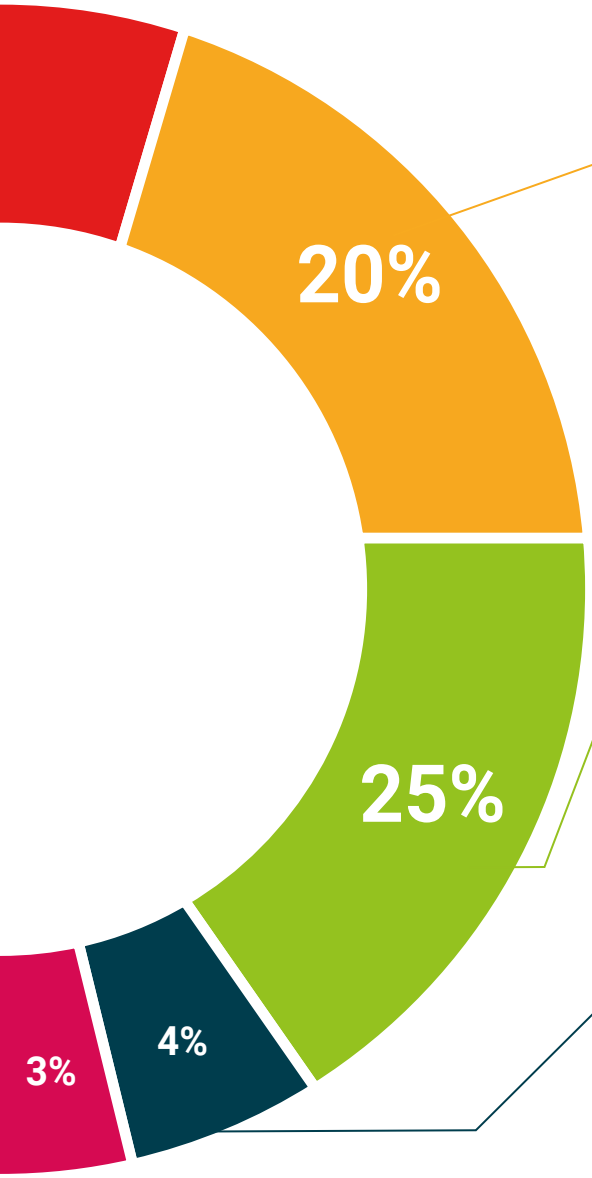
### Practising Skills and Abilities

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.

05

# Certificate

The Postgraduate Certificate in Industrial Production guarantees students, in addition to the most rigorous 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 program will allow you to obtain your **Postgraduate Certificate in Industrial Production** 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** title 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 Industrial Production**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

**Postgraduate Certificate in Industrial Production**

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

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 Global University will make the necessary arrangements to obtain it, at an additional cost.

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