

Postgraduate Certificate Industrial Production Planning and Control





Postgraduate Certificate Industrial Production Planning and Control

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

Website: www.techtitute.com/us/engineering/postgraduate-certificate/industrial-production-planning-control

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

Production processes are indispensable in any industry, having become one of the key points on which all focus should be placed. In this way, its planning and control acquire great relevance, since a small failure at this point in the chain can generate a major conflict that prevents the planned objectives from being met. In this way, it is essential that the person in charge of the field acquires the necessary competencies for its adequate control and, thus, be capable of directing the department's strategies towards the fulfillment of the company's general objectives.

This program is aimed at offering the higher qualification demanded by professionals and that they will acquire with a first level program.





“

Production processes are one of the pillars of industries, so their planning and control must be carried out with total precision”

The Production area, in its broadest sense (Production + Materials Control + Maintenance + Process Engineering), is one of the pillars on which the future of industrial companies is based, being the productive operations one of the key elements for the achievement of the objectives of all companies: profitability through customer satisfaction. For this reason, the advanced training of professionals in this field is a must, since any small error can ruin the final result.

In this regard, knowing how to operate safely in all areas of production is essential, as is having adequate and up-to-date knowledge of the main tools that can be used in this field. Therefore, programs of this kind are highly interesting for engineers who want to acquire a higher qualification and be able to handle their work effectively.

Based on this principle, TECH Technological University has designed this comprehensive program, whose content combines theoretical aspects and an eminently practical approach that provides engineers with a deep understanding of the reality of the digital company. In this way, this program will provide the professional with the capacity and tools necessary to efficiently manage all aspects related to industrial management in order to be able to compete adequately both in the present and in a future full of challenges, opportunities and changes. Ultimately, the program will totally online provide engineering professionals a knowledge update that will place them at the forefront of the latest developments in every relevant branch of knowledge.

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

- ◆ The development of practical cases presented by experts in *Industrial Management*
- ◆ 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 the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies in *Industrial Management*
- ◆ 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



Continue your studies with this TECH Technological University program and enter a relevant field in the industrial field"

“*The wide range of case studies will be very useful for you to easily grasp the theoretical concepts*”

Its teaching staff includes professionals from the field of engineering, who contribute their work experience to this program, as well as renowned specialists from leading companies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive specialization for real situations.

This program is designed around Problem-Based Learning, whereby the engineer must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts

A 100% online program that will allow you to study from anywhere in the world. All you need is a computer or mobile device with an internet connection.

Achieve success in production planning and production planning and control thanks to this TECH Technological University program.



02

Objectives

TECH Technological University is committed to quality education as an indispensable method to improve the skills of its students in different professional fields. Therefore, engineers working in the industrial sector will find in this program the perfect opportunity to fulfill their academic objectives, achieving a superior training that will allow them to plan and control the production of an industry in an adequate and efficient way. A great opportunity to become a specialist in a short period of time.





“

TECH offers you all its academic resources so that you can specialize in this field”



General Objectives

- ◆ Apply the main strategic keys to better compete in current and future times
- ◆ Master the tools to achieve excellence in the sector
- ◆ Define business strategies and deployment in an organization, process management, and structural typology to better adapt to changes
- ◆ Manage the projects presented with both conventional and agile methodologies
- ◆ Better manage all the necessary steps and phases in the design and development of new products
- ◆ Perform production planning and control with the objective of optimizing resources and adapting to demand as well as possible
- ◆ Manage quality throughout the organization and apply the most important tools for continuous improvement of products and processes



*Achieve your academic goals
with this program on Industrial
Production Planning and Control”*





Specific Objectives

- ◆ Gain in-depth knowledge of the work dynamics of the production units and the interaction between their functions
- ◆ Understand the role of advanced planning and the production plan in reducing incidents and problems in the development of production activities
- ◆ Address the importance of production planning as a key tool for the company's profitability
- ◆ Acquire all the knowledge to lead the continuous transformations required in production facilities
- ◆ Develop all skills required to understand implementing the most proven production planning and control methodologies such as Just in Time or Theory of Constraints
- ◆ Analyze the importance of maintenance management, in order to maintain high production efficiency
- ◆ Reflect on the importance of implementing organizational systems aimed at improving delivery times and immediate response to market requirements

03

Course Management

Professionals with great reputation in the industrial sector have joined forces in this program to offer students the most innovative programs on the market on Industrial Production Planning and Control. A team made up of faculty members who understand the importance of higher education to improve the qualification of professionals and, therefore, be more effective in their daily practice. Above all, they believe in new educational technologies to improve learning.





“

Faculty in this program have selected the most appropriate resources to facilitate your learning”

Management



Dr. Asensi, Francisco Andrés

- ♦ Business consultant and specialist in Industrial Management and Digital Transformation
- ♦ Production and Logistics Coordinator at IDAI NATURE
- ♦ Coach in Strategic Coaching
- ♦ Organization Manager for Talleres Lemar
- ♦ Organization and Management of companies for Lab Radio SA
- ♦ PhD in Industrial Engineering in Business Organization from the University of Castilla la Mancha
- ♦ Degree Industrial in Industrial Organization Engineer from the University Polytechnic of Valencia

Professors

Mr. Lucero Palau, Tomás

- ♦ Director de Fábrica Zanotti Smart Solutions
- ♦ Project Manager in ADUM Consulting
- ♦ Operations Director at, S.A
- ♦ Production Manager at SRG Global
- ♦ Master in Business Administration by ESTEMA Business School
- ♦ Industrial Engineer from the Polytechnic University of Valencia



04

Structure and Content

The syllabus of this TECH program has been designed following the quality criteria demanded by today's society. In this way, it has been structured with the objective that the student himself can self-manage his study and carry out a self-guided learning that allows him to understand all the aspects related to the planning and control of the production in the industries. This program will become a guide for professionals in the sector.





“A complete syllabus to offer you the most complete qualification on the market”

Module 1. Production Planning and Control

- 1.1. Phases of Production Planning
 - 1.1.1. Advanced Planning
 - 1.1.2. Sales Projections, Methods
 - 1.1.3. Definition of *Takt-Time*
 - 1.1.4. Material Plan-MRP- Minimum Stock
 - 1.1.5. Personal Plan
 - 1.1.6. Equipment Needs
- 1.2. Performance Development Plan (PDP)
 - 1.2.1. Factors to Consider
 - 1.2.2. *Push* Planning
 - 1.2.3. *Pull* Planning
 - 1.2.4. Mixed Systems
- 1.3. Kanban
 - 1.3.1. Types of Kanban
 - 1.3.2. Uses of Kanban
 - 1.3.3. Autonomous Planning: 2-bin Kanban
- 1.4. Production Control
 - 1.4.1. PDP Deviations and Reporting
 - 1.4.2. Monitoring of Performance in Production: OEE
 - 1.4.3. Monitoring of Total Capacity: TEEP
- 1.5. Production Organization
 - 1.5.1. Production Equipment
 - 1.5.2. Engineering Processes
 - 1.5.3. Maintenance
 - 1.5.4. Control of Materials
- 1.6. Total Productive Maintenance (TPM)
 - 1.6.1. Corrective Maintenance
 - 1.6.2. Autonomous Maintenance
 - 1.6.3. Preventative Maintenance
 - 1.6.4. Predictive Maintenance
 - 1.6.5. Maintenance Efficiency Indicators MTBF-MTTR



- 1.7. Plant Layout
 - 1.7.1. Conditioning Factors
 - 1.7.2. Online Production
 - 1.7.3. Production in Work Cells
 - 1.7.4. Applications
 - 1.7.5. SLP Methodology
- 1.8. *Just-In-Time* (JIT)
 - 1.8.1. Description and Origins of JIT
 - 1.8.2. Objectives
 - 1.8.3. Applications of JIT. Product Sequencing
- 1.9. Theory of Constraints (TOC)
 - 1.9.1. Fundamental Principles
 - 1.9.2. The 5 Steps of TOC and its Application
 - 1.9.3. Advantages and Disadvantages
- 1.10. *Quick Response Manufacturing* (QRM)
 - 1.10.1. Description
 - 1.10.2. Key Points for the Structuring
 - 1.10.3. Implementation of the QRM

“

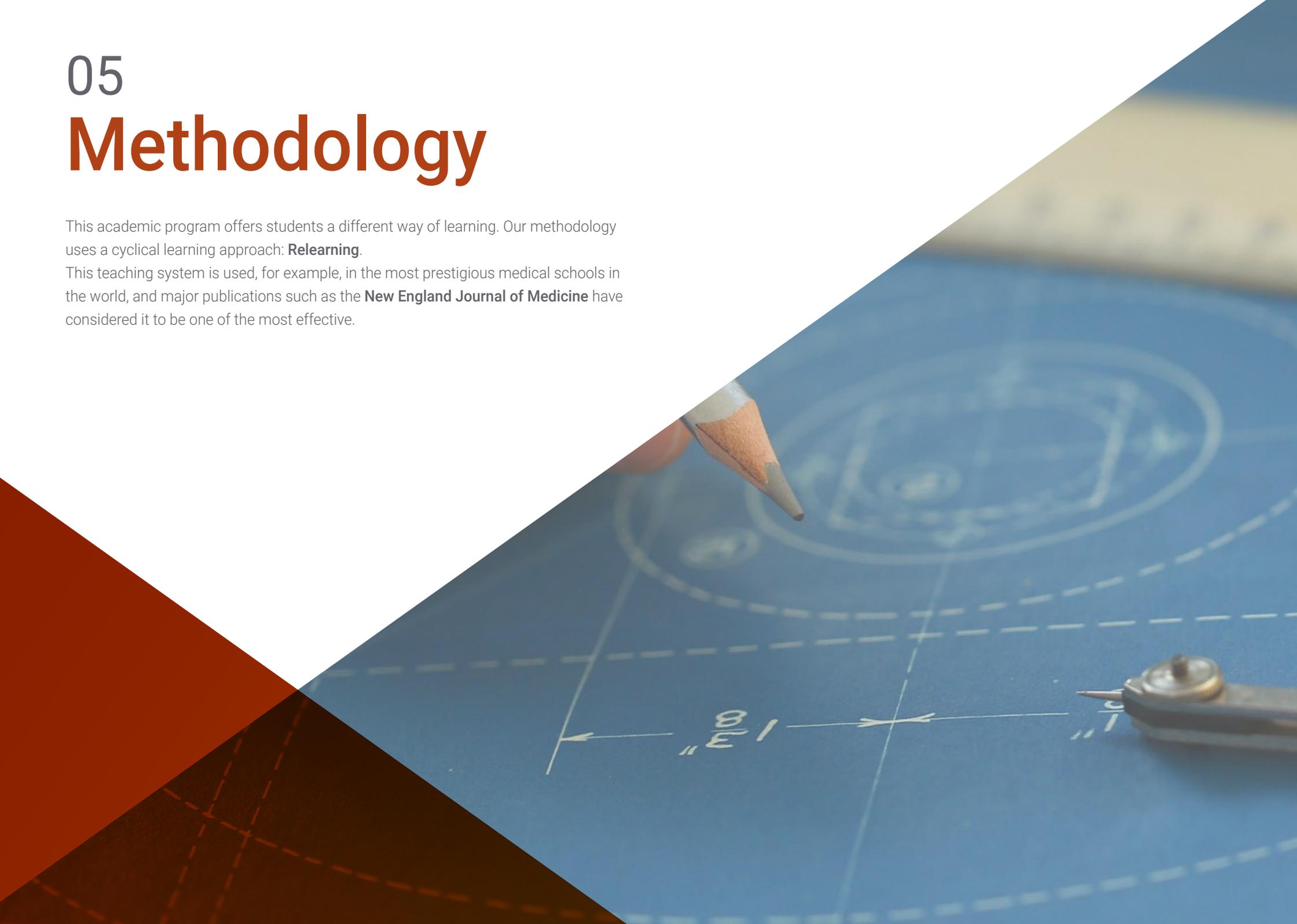
Take an academic tour through the main concepts of production planning and control”

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.



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 that you are presented with 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.

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.



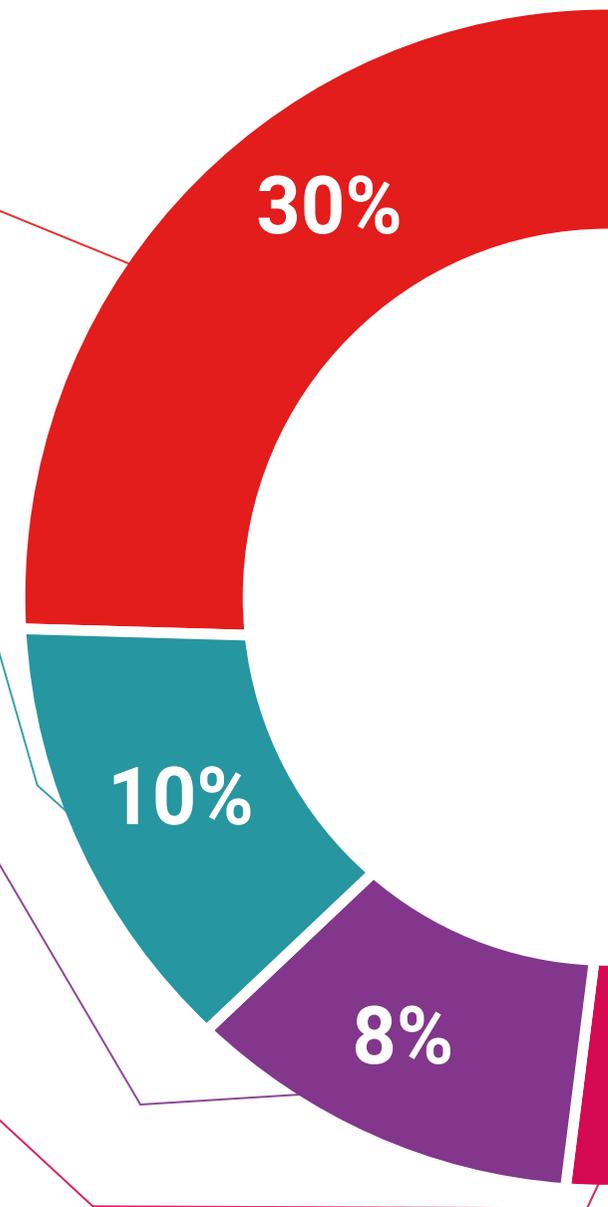
Practising Skills and Abilities

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 Industrial Production Planning and Control 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 Industrial Production Planning and Control** contains the Educational 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 Industrial Production Planning and Control**

Official N° of Hours: **150h.**



*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.



Postgraduate Certificate Industrial Production Planning and Control

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

Postgraduate Certificate Industrial Production Planning and Control

