Postgraduate Certificate

Product Design and Development in Industrial Companies

tech technological university

tech technological university

Postgraduate Certificate
Product Design and Development in Industrial Companies

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**
- Aimed at:**engineers, and experienced graduates who want to deepen and update themselves in all the necessary aspects to be taken into account for a proper product design for industrial companies.**

Website: **www.techtitute.com/us/school-of-business/postgraduate-certificate/product-design-development-industrial-companies**

Index

01

Welcome

The design and creation of a product is a critical phase for any industrial company. This important process, which consists of the identification, evaluation and selection of ideas, preliminary design, product and process development and engineering, testing and evaluation of designs, final product development and distribution, is the only thing that guarantees that the end customer's needs are met, which is why it is so important. Aware of this, TECH professionals have designed this complete program that will enable the professional to be able to work autonomously and successfully in the product development phase.

Postgraduate Certificate in Product Design and Development in Industrial Companies. TECH Technological University

Thanks to this Postgraduate Certificate, the professional will be able to work successfully and efficiently in the product design phase"

02

Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class centre for intensive managerial skills training.

TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"

At TECH Technological University

Innovation

The university offers an online learning model that combines the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.

The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95% | **of TECH students successfully complete their studies**

Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

100,000+
executives trained each year

200+
different nationalities

Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

500+ | **collaborative agreements with leading companies**

Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.

Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.

Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.

"At TECH, you will have access to the most rigorous and up-to-date case studies in the academic community"

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:

Analysis

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.

Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding academic itinerary.

Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.

03

Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.

We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you training of the highest academic level"

This program will provide students with a multitude of professional and personal advantages, particularly the following:

01

A significant career boost

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of participants achieve positive career development in less than 2 years.

02

Develop a strategic and global vision of companies

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional areas.

Our global vision of companies will improve your strategic vision.

03

Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.

04

Take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.

05

Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.

06

Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different areas in companies.

20% of our students develop their own business idea.

07

Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.

08

Be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified professors from the most prestigious universities in the world: the TECH Technological University community.

We give you the opportunity to train with a team of world renowned teachers.

04

Objectives

This program is designed with the objective of strengthening the student's capabilities in everything related to the process of designing and creating products for industrial companies, in addition to developing new skills that will be essential in their professional development. Thus, after completing the study plan, the student will be able to make global decisions with an innovative perspective and an international vision aimed at achieving the proposed objectives.

Grow by studying with TECH and start to see how you are achieving each of your goals"

The students' objectives are TECH's too. Working together to achieve them.

The **Postgraduate Certificate in Product Design and Development in Industrial Companies** will enable the student to:

01 Learn in-depth about the techniques, their phases and the tools related to the conceptual design that precedes the final product design, as well as the translation of the final customer's requirements into technical specifications that the product will have to comply with

02 Establish all the "actors" to be taken into account in the design and development process of a new product for its correct performance in terms of quality, time, cost, resources, communications and risks

03 In depth breakdown of the design process of a new product from CAD design through failure analysis and drawing to agreement that the design will meet requirements

04 Analyze available prototyping options for proper evaluation of the initial design

05 Achieve a detailed understanding of the product validation process to ensure that it meets all expected quality requirements

06 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

05

Structure and Content

The Postgraduate Certificate in Product Design and Development in Industrial Companies is a program designed based on the needs of 21st century students and is taught in a 100% online format so that the professional can choose the time and place that best suits their availability, schedule and interests. In addition, by studying this program the student will have access to the most complete and up to date content compendium on the market. All this, in a syllabus that is developed over 6 weeks and that aims to be a unique and stimulating experience that lays the foundations for the student's professional success.

You are just one click away from accessing the most complete and up to date content on the market in project management for industrial companies"

Syllabus

Product design and development is one of the greatest challenges facing any company. The main objective is to achieve a product that satisfies the consumer's needs using the least amount of resources possible. The needs of the end user must be the initial inputs to define the specifications.

It is essential to work as a team and use techniques and methodologies that help to generate end-user-oriented solutions so that the products and services generated provide value to people. The components of the final product must be taken into account from the earliest stages of design and design activities must occur in parallel in the process.

A successful product design and development process is possible through advanced product quality planning, from 3D construction, material definition and design verification; through prototype development to help improve the design; continuing with the development of the manufacturing process, all the necessary tooling for manufacturing, assembly and control, to validation with testing and dimensional analysis to ensure the quality of the final product and its manufacturing. Not to mention the importance of change management, which includes the analysis and reduction of variability, as well as the use of lessons learned and proven practices that help improve the performance of the final product.

Innovation and technology transfer should not be left behind either, although there are times when this happens during the design phase, innovation and technology transfer as a separate process helps to reduce product design and development times.

This Postgraduate Certificate is developed over 6 week and is divided into 1 module:

Module 1 Product Design and Development

Where, when and how is it taught?

TECH offers you the possibility of taking this program completely online. During the 6 months of program, the student will be able to access all the contents of this program at any time, which will allow them to self manage study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.

Module 1. Product Design and Development

1.1. QFD in Product Design and Development (*Quality Function Deployment*)

1.1.1. From the Voice of the Customer to Technical Requirements
1.1.2. The House of Quality/Phases for its Development
1.1.3. Advantages and Limitations

1.2. *Design Thinking*

1.2.1. Design, Need, Technology and Strategy
1.2.2. Stages of the Process
1.2.3. Tools and Techniques Used

1.3. Concurrent Engineering

1.3.1. Fundamentals of Concurrent Engineering
1.3.2. Methodology of Concurrent Engineering
1.3.3. Tools Used

1.4. Programming. Planning and Definition

1.4.1. Requirements. Quality Management
1.4.2. Development Phases. Time Management
1.4.3. Materials, Feasibility, Processes. Cost Management
1.4.4. Project Equipment. Human Resource Management
1.4.5. Information. Communications Management
1.4.6. Risk Analysis. Risk Management

1.5. Products. Their Design (CAD) and Development

1.5.1. Information Management /PLM / Product Life Cycle
1.5.2. Modes and Effects of Product Failure
1.5.3. CAD Construction. Review
1.5.4. Product and Manufacturing Plans
1.5.5. Design Verification

1.6. Prototypes. Their Development

1.6.1. Rapid Prototyping
1.6.2. Control Plan
1.6.3. Experiment Design
1.6.4. The Analysis of Measurement Systems

1.7. Production Process. Design and Development

1.7.1. Modes and Effects of Process Failure
1.7.2. Design and Construction of Manufacturing Tools
1.7.3. Design and Construction of Control Tools (Gauges)
1.7.4. Adjustment Phase
1.7.5. Production Start-Up
1.7.6. Initial Evaluation of the Process

1.8. Product and Process. Its Validation

1.8.1. Evaluation of Measurement Systems
1.8.2. Validation Tests
1.8.3. Statistical Process Control (SPC)
1.8.4. Product Certification

1.9. Change Management. Improvement and Corrective Actions

1.9.1. Type of Change
1.9.2. Variability Analysis, Improvement
1.9.3. Lessons Learned and Practices Tested
1.9.4. Process of Change

1.10. Innovation and Technology Transfer

1.10.1. Intellectual Property
1.10.2. Innovation
1.10.3. Technological Transfer

06

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"

TECH Business School uses the 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"

This program prepares you to face business challenges in uncertain environments and achieve business success.

Our program prepares you to face new challenges in uncertain environments and achieve success in your career.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.

> *You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments"*

The case method has been the most widely used learning system among the world's leading business 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

Relearning Methodology

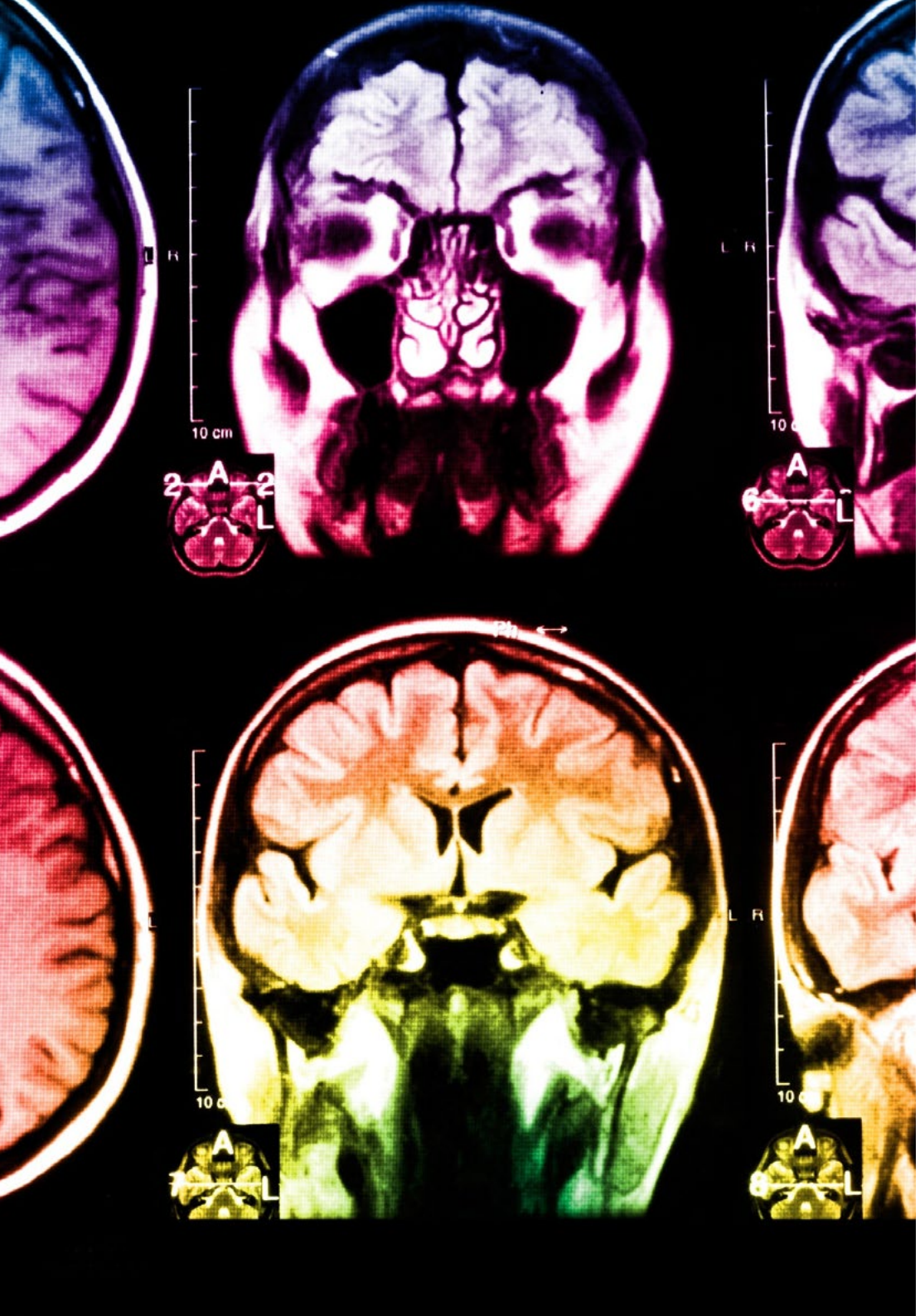
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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 online business school is the only one in the world licensed to incorporate 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.

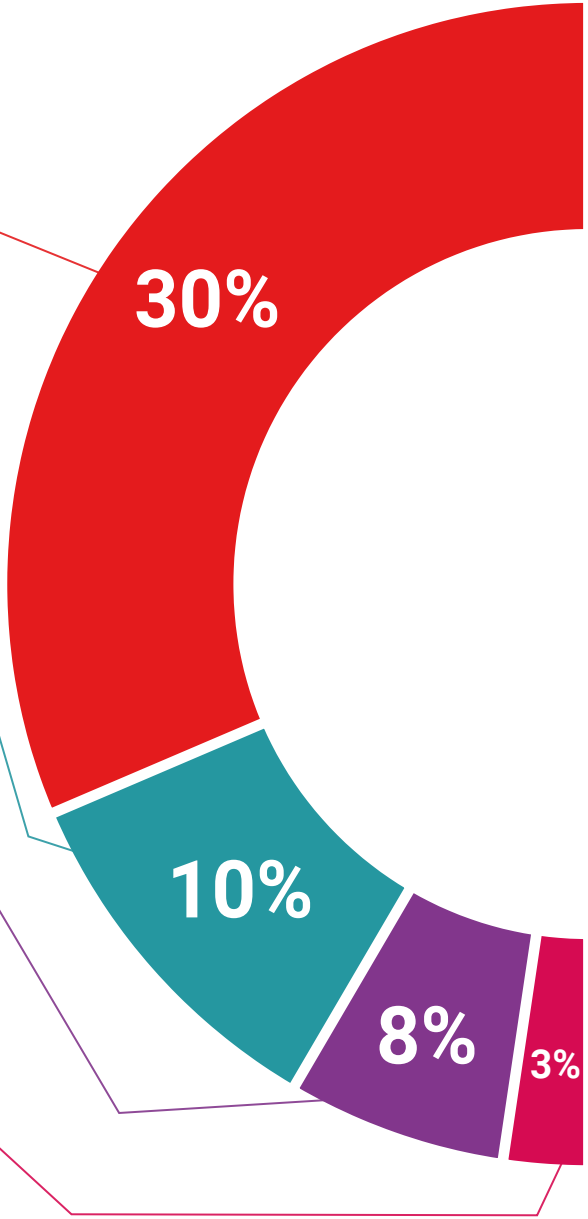
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

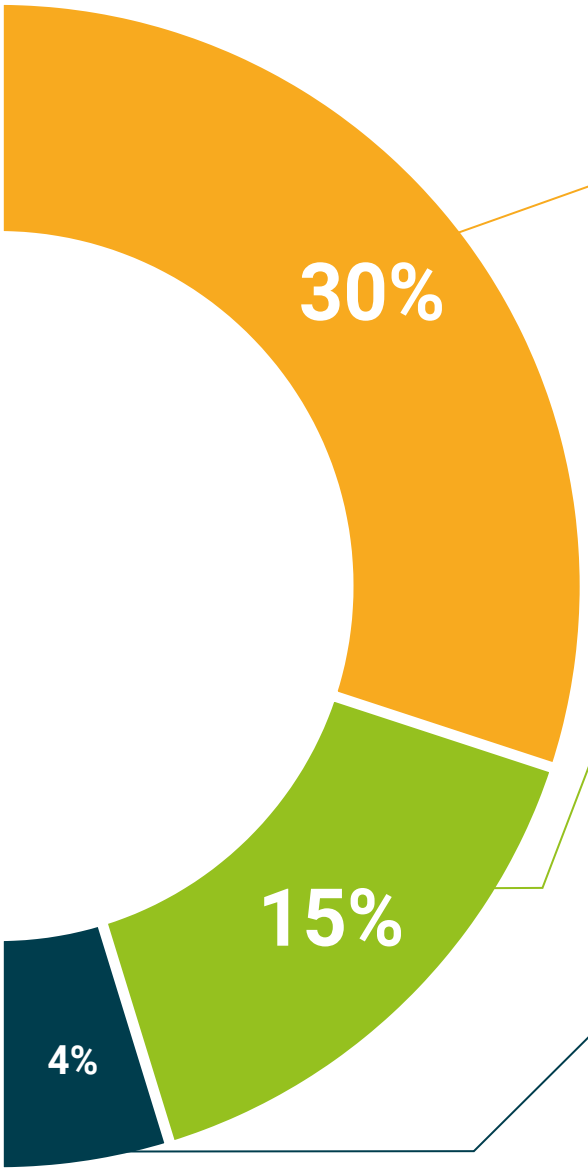
Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.

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 senior management 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.

07

Our Students’ Profiles

This Postgraduate Certificate is aimed at engineers and graduates with experience who want to delve deeper and update in all the necessary aspects to be taken into account for the proper management of an industrial company.

Students with these qualifications must have a sufficient knowledge base to complete the modules of the curriculum of this Postgraduate Certificate.

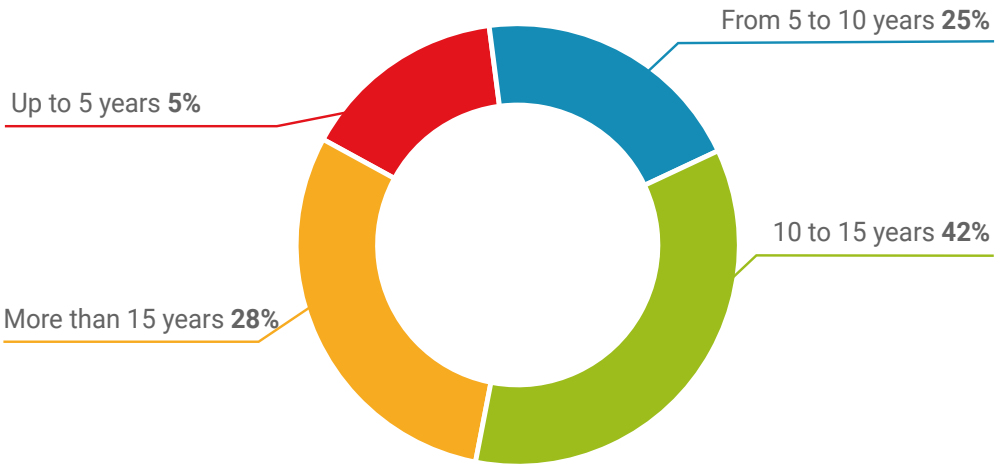
The Postgraduate Certificate is also open to professionals who, being university graduates in any area, have two years of work experience in the field of *Industrial Management*.

Study with a community of teachers and students that will increase your network"

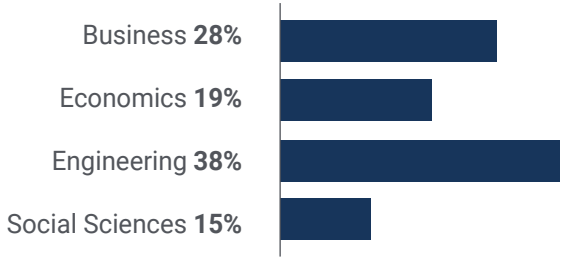
Average Age

Between **35** and **45** years old

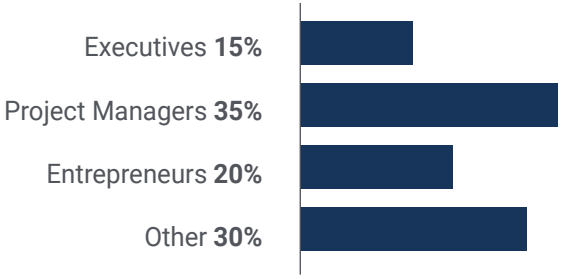
Years of Experience



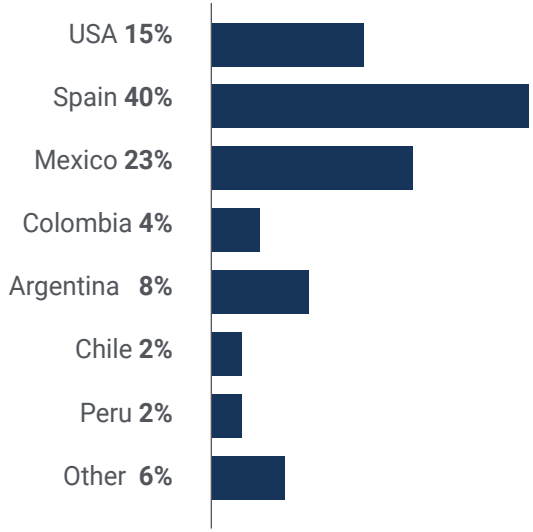
Training



Academic Profile



Geographical Distribution



Adriana Sánchez

Project manager

"This course has given me the opportunity to update my knowledge without leaving aside the rest of my daily work. As a working mother, I have little free time and the time I have, I want to be able to dedicate it to my qualifications through programs as complete as this one. I will certainly choose TECH again for my next programs"

08

Course Management

This Postgraduate Certificate includes in its faculty professionals and specialists of reference in everything related to the creation and design of products for industrial companies, who pour into this up to date program the experience of their years of work. In addition, other experts of recognized prestige in related areas participate in its design and elaboration, completing the Postgraduate Certificate in an interdisciplinary way, making it, therefore, a unique and highly nourishing experience at an academic level for the student.

Not only will you have the best educational material, but also the experience of prestigious professionals who will be your academic guides throughout the program"

Management

Dr. Asensi, Francisco Andrés

- PhD in Industrial Engineering in Business Organization from the University of Castilla la Mancha (UCLM)
- Degree Industrial in Industrial Organization Engineer from the University Polytechnic of Valencia
- He has worked in several areas, such as Engineering, Quality, Production, Logistics, Information Systems and Human Resources, in companies of several industrial sectors
- He has implemented and developed a multitude of management systems for excellence (Quality, Scorecard, *Lean Manufacturing*, Continuous Improvement and Process Improvement) in several industrial companies
- Coach of *Strategic* Coaching
- Author of various business books: "The Adaptive Enterprise", "*Lean Manufacturing: Key Indicators used to efficiently manage Continuous Improvement*", "*Lean Manufacturing*: Keys to Material Flow Improvement"
- Author of several books on Personal and Professional Development: "Total Leader", "self-coaching"

Professors

Mr. Ponce Lucas, Miguel Enrique

- Responsible for various technical departments (Product Development, Advanced Engineering, Project Management, Innovation, Quality Management)
- Degree in Industrial Engineering (Mechanical) from the Polytechnic University of Valencia
- Development of the quality management system according to ISO TS 16949 and IATF 16949
- Participation in new product patents
- Development of change management system
- Responsible for the global knowledge management system
- Development of the Engineering Specialization System at a global level

Mr. Morado Vázquez. Eduardo

- Industrial Engineer in Product Design at UPV (2000)
- Quality Assurance at*Ford Motor Company* (2000-2004)
- MBA and (2011) Superior Master's Degree in Occupational Risk Prevention (2005)
- Implementation and leadership of engineering projects in manufacturing plants in the automotive and chemical sector, for first level multinationals (Spain, UK, Germany, Mexico), (2004-2021)
- Extensive experience as *Key User*and trainer in the implementation of Quality, Safety, Environmental Management Systems (ISO, OSHAS, GMP), ERPs (SAP, Ross) and quality management tools (6-Sigma, FMEA, 8D, QCP), and as PM of Engineering and Maintenance, continuous and process improvement (TPM, R&M, APQP, LRR, PSM, SMED, Poka-Yoke, etc.)
- Collaboration as a Mentor of students at UPV and in different initiatives of non-profit organizations and foundations for the promotion of STEM in young people between 6 and 18 years old (2000-2018)

09

Impact on Your Career

TECH is aware that taking a program of these characteristics is a great economic, professional and of course, personal investment. The ultimate goal of this great effort should be to achieve professional growth.

And for this, we offer you a unique opportunity with this Postgraduate Certificate, thanks to which you will be about to increase your skills and therefore, improve your daily practice and your chances of career advancement.

Our challenge is to generate a positive change in your professional career. We are fully committed to helping you achieve it"

Are you ready to take the leap? Excellent professional development awaits

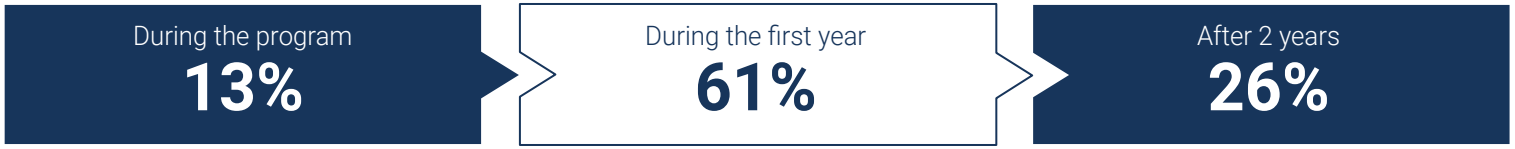
TECH's Postgraduate Certificate in Design and Development in Industrial Companies is an intensive program that will prepare you to face business challenges and decisions in the field of Design and Development in Industrial Companies. Its main objective is to promote your personal and professional growth, to help you achieve success.

If you want to improve yourself, make a positive change professionally and network with the best, this is the place for you.

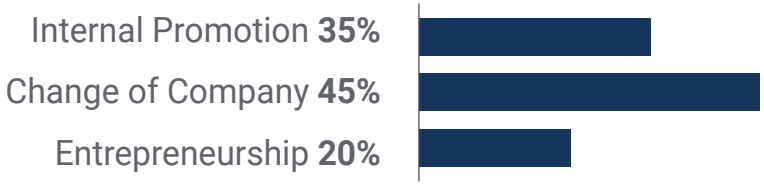
Achieve a positive change in your career, thanks to the opportunity that TECH offers you with this program.

Don't miss the opportunity to specialize with us. You will find the most relevant information on this subject that will allow you to give a boost to your profession.

When the change occurs



Type of change



Salary increase

This program represents a salary increase of more than **25%** for our students

10

Benefits for Your Company

The Postgraduate Certificate in Design and Development in Industrial Companies contributes to elevate the organization's talent to its maximum potential by specializing high level leaders. Thus, participating in this specialization is a unique opportunity to access a powerful network of contacts in which to find future professional partners, customers or suppliers.

This program will provide you with the keys to bring a new business vision to your company"

Developing and retaining talent in companies is the best long-term investment.

01

Intellectual Capital and Talent Growth

Bring new concepts, strategies and perspectives to the company that can bring about relevant changes in the organization

02

Retaining high potential executives to avoid talent drain

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company

03

Building agents of change

Be able to make decisions in times of uncertainty and crisis, helping the organization to overcome obstacles

04

Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy

05

Project Development

Be able to work on a real project or develop new projects in the R+D or Business Development area of your company

06

Increased competitiveness

This program will equip students with the skills to take on new challenges and drive the organization forward

11

Certificate

The Postgraduate Certificate in Product Design and Development in Industrial Companies guarantees students, in addition to the most rigorous and up to date education, access to a qualification 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 Product Design and Development in Industrial Companies** contains the most complete and up to date program 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 Product Design and Development in Industrial Companies**

Official Nº of hours: **150 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Product Design and Development in Industrial Companies

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

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. 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.

tech technological university

Postgraduate Certificate
Product Design and Development in Industrial Companies

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

Postgraduate Certificate

Product Design and Development in Industrial Companies

tech technological university