

Postgraduate Diploma Textile Value Chain



Postgraduate Diploma Textile Value Chain

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

Website: www.techtitute.com/in/engineering/postgraduate-diploma/postgraduate-diploma-textile-value-chain

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01

Introduction

A strong Value Chain is a crucial aspect for textile development companies to create world-class products at the lowest economic and time cost. Its proper mastery also makes it possible to manufacture goods such as garments or decorative elements with a quality that fully meets customer expectations. For this reason, engineers specializing in textile design and management must have extensive knowledge about this field, which is why TECH has created this degree. Through this course, the student will learn optimized techniques to evaluate the resistance of fabrics and will establish the methods of the knitwear manufacturing process, 100% online and from home.





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Through this degree, you will learn the most sophisticated techniques for evaluating the strength of fabrics and guaranteeing the quality of manufactured textile goods"

The production of textile goods is a complex process that encompasses a large number of tasks, which must be efficiently coordinated by professionals to ensure the success of the business activity. In that regard, it is essential to properly integrate the functions developed by the design, quality control and manufacturing teams in order to create products of excellent quality. Since this work is carried out by the manager of the Value Chain, this professional must have the best and most up-to-date knowledge to respond in a solvent way to the challenges presented by this profession.

That is why TECH has designed this Postgraduate Diploma, which will enable the student to detect the most relevant and up-to-date aspects related to the Textile Value Chain and, therefore, to guarantee their professional growth. During 450 intensive hours of learning, the student will identify the latest strategies for measuring abrasion and wrinkle resistance in fabrics and determine the sophisticated organizational and management mechanisms of the cutting and sewing industry. They will also establish the most accurate methodology for the production of luxury garments and learn about sustainable applications based on the use of new fibers.

All this following a 100% online methodology that will give the engineer the opportunity to perfectly combine this excellent learning with their personal and professional duties. In the same way, the didactic contents that will be available throughout this degree are specifically elaborated by the best specialists in Engineering and Textile Management. For this reason, all the knowledge that the student will acquire will have a very complete applicability in their work activities.

This **Postgraduate Diploma in Textile Value Chain** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ Case studies presented by experts in Textile Engineering and Textile Finishes
- ◆ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



This Postgraduate Diploma in Textile Value Chain will enable you to adopt the most efficient organization and management mechanisms for the cutting and sewing industry to optimize its productivity"

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Throughout this degree you will learn about the most sustainable textile production strategies, based on the use of new fibers, in order to reduce this activity's environmental impact"

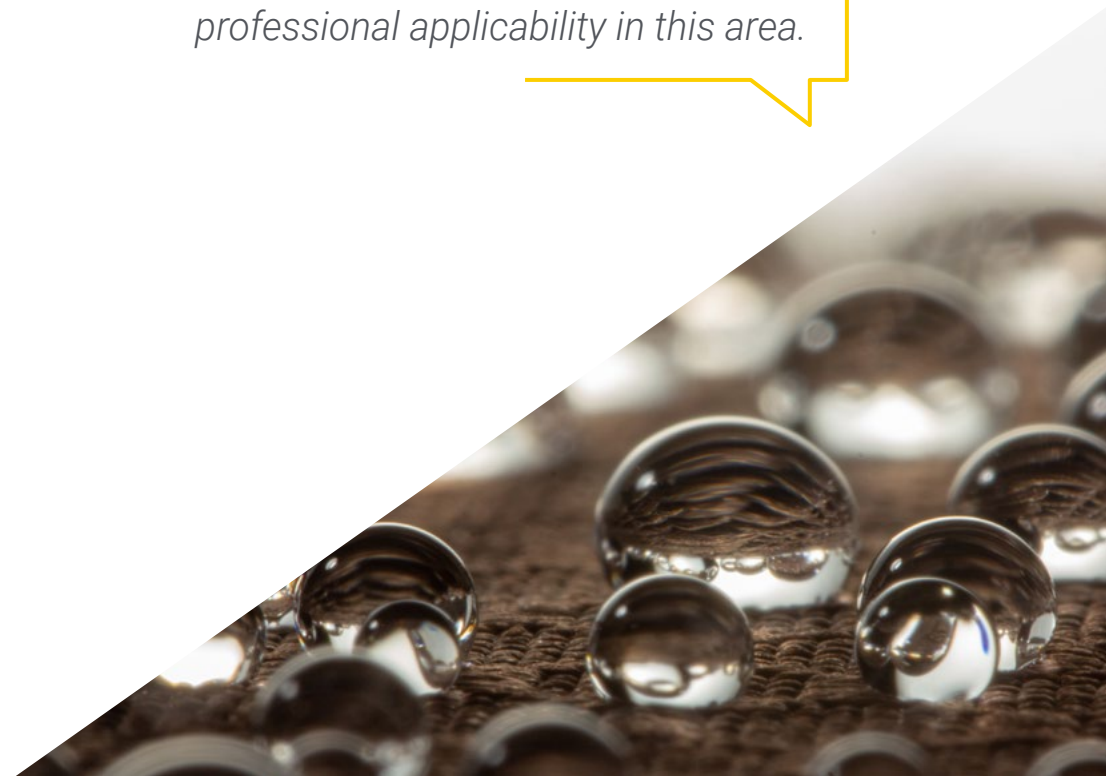
The program's teaching staff includes professionals from sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its 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 an immersion education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. This will be done with the help of an innovative system of interactive videos made by renowned experts.

Perfectly develop your skills in the Textile Value Chain in only 450 hours through didactic formats such as video or self-assessment tests.

Access a curriculum designed by the best experts in the field of Textile Engineering to assimilate the knowledge with greater professional applicability in this area.



02 Objectives

This Postgraduate Diploma in Textile Value Chain has been created with the purpose of providing the engineer with the most professionally applicable knowledge in this field. This way, you will delve into protocols for the description and evaluation of fabric quality or identify the most advanced strategies to guarantee sustainability in the textile practice. In addition, you will preserve your complete learning thanks to the objectives that TECH has outlined for this degree.



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Become a top professional in the field of textile industry thanks to the complete knowledge you will acquire in this Postgraduate Diploma"



General Objectives

- ◆ Classify the different types of fibers according to their nature
- ◆ Determine the main physical characteristics of textiles
- ◆ Acquire technical skills to recognize the quality of textiles
- ◆ Establish practical and technical criteria for the selection of suitable materials for the development of textile items in the fashion sector
- ◆ Identify and apply the sources of inspiration and the most innovative trends
- ◆ Generate a transversal vision of textile structures with a multi-sectorial vision of their applications





Specific Objectives

Module 1. Characterization and evaluation of fabric quality

- ◆ Develop the practical and technical foundations for interpreting textile quality results
- ◆ Examine the principal physical tests used for fabric characterization
- ◆ Identify and work with the operation of the main test measurement equipment
- ◆ Structuring of a self evaluation plan for the quality of fabrics
- ◆ Analyze and synthesize the regulations applicable to the evaluation of the quality of fabrics
- ◆ Determine the quality and sustainability parameters of fabrics according to market requirements.
- ◆ Justify and express in a technical report the acquired transversal knowledge and skills

Module 2. Manufacture of textile products for fashion application

- ◆ Analyze the methodology within the garment industry itself
- ◆ Establish and specify criteria for the organization and distribution of the garment industry
- ◆ Compile acquired fabric specifications, openwork and knitted fabrics in the garment sector
- ◆ Develop trends and innovations in technology and methodology related to garment production

Module 3. Sustainability in the textile industry

- ◆ Analyze the nature of textiles and their polluting nature
- ◆ Investigate the most polluting practices in the sector
- ◆ Examine textile sector legislation linked to environmental needs
- ◆ Determine requirements and limitations of new, more environmentally friendly textiles
- ◆ Evaluate developments and trends in sustainability in the textile industry



*Achieve the goals designed by
TECH and enjoy excellent job
prospects in the textile industry"*

03

Course Management

In order to maintain intact the exquisite educational level so characteristic of TECH programs, this institution has selected excellent professionals in the field of Engineering and Textile Production to be responsible for the implementation of this Postgraduate Diploma. In addition, the didactic contents available throughout this degree are carried out by these experts. For this reason, the knowledge provided to the student will have been previously applied in professional experiences.



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With the help of the best active specialists in Textile Engineering, you will acquire knowledge that is more in tune with the advances occurring in this sector”

Management



Dr. González López, Laura

- ◆ Expert in Textile and Paper Engineering
- ◆ Textile Innovation Production Manager at *Waste Prevention SL*
- ◆ Pattern and garment maker oriented to the automotive sector
- ◆ Researcher in the Tectex group
- ◆ Lecturer in undergraduate and postgraduate university studies
- ◆ D. in Textile and Paper Engineering from the Polytechnic University of Catalonia
- ◆ Graduate in Political Science and Administration from the Autonomous University of Barcelona
- ◆ PROFESSIONAL MASTER'S DEGREE in Textile and Paper Engineering

Professors

Mr. Martínez Estrada, Marc

- ◆ Engineer specialized in textile processes and technologies
- ◆ Product Engineer at Firstvision Technologies SL
- ◆ Researcher at RFEMC group
- ◆ Lecturer in undergraduate and postgraduate university studies related to Engineering
- ◆ Graduate in Industrial Technologies Engineering from the Polytechnic University of Catalonia
- ◆ Master's Degree in Industrial Engineering

Ms. Ruiz Caballero, Ainhoa

- ◆ Specialist in the sports textile industry
- ◆ Commercial team leader of technical textile products for extreme sports at *McTrek Retail GmbH Aachen*
- ◆ Technician specialized in textile products *Hightech* for high mountain at *McTrek Outdoor Sports GmbH Aachen*
- ◆ Degree in Political Science and Law from the Polytechnic University of Catalonia
- ◆ Master's Degree in European Union by the European Institute of Bilbao

Ms. Galí Pérez, Susan

- ◆ Expert in Industrial Pattern Making and Fashion
- ◆ Responsible of management and production of fashion and luxury garments collections at Yolancris
- ◆ Responsible for the management and production of fashion, accessories and children's wear collections at Mandragora
- ◆ Designer and dressmaker of lingerie and corsetry
- ◆ Handcrafted and tailor-made dressmaker
- ◆ Designer and producer of stage costumes for theater companies
- ◆ Lecturer in courses related to Fashion
- ◆ Superior Technician in Industrial and Fashion Pattern Making
- ◆ Postgraduate in Advanced and Creative Patternmaking



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

04

Structure and Content

The syllabus of this Postgraduate Diploma has been designed with the intention of providing the student, through 3 very complete modules, a full deepening in the field of the Textile Value Chain. In addition, the didactic contents accessible to the student during this academic experience are available in a wide range of textual and multimedia formats, through a 100% online methodology, the engineer will enjoy a 24-hour teaching, adapted to his or her personal and academic preferences.



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The modern Relearning system so characteristic of this Postgraduate Diploma will allow you to learn at your own pace without depending on external conditioning factors”

Module 1. Characterization and evaluation of fabric quality

- 1.1. Structure and Properties of Fabrics
 - 1.1.1. Fabrics as anisotropic materials
 - 1.1.2. Continuous models
 - 1.1.2.1. Fabrics as a continuous material without regard to microstructure
 - 1.1.3. Discontinued models
 - 1.1.3.1. Fabric analysis based on the information of its components
- 1.2. Categories of fabric properties
 - 1.2.1. Textile substrate structural parameters
 - 1.2.2. Functional parameters on the properties of fabric utilization
 - 1.2.3. Parameters of manufacturability suitable for industrial manufacturing operations
- 1.3. Behavior of textiles against fluids
 - 1.3.1. Specific properties with respect to air permeability
 - 1.3.2. Resistance to water infiltration
 - 1.3.2.1. Tests under hydrostatic pressure and water resistance
 - 1.3.3. Water steam permeability and moisture resistance of fabrics
- 1.4. Performance of textiles in use
 - 1.4.1. *Pilling* effect on the surface of the tissues and evaluation methods
 - 1.4.2. Spinning parameters and fabric parameters. Influence on the behavior of fabric use
 - 1.4.3. Abrasion and wrinkle resistance. Methods of Analysis
 - 1.4.4. Thermal conductivity of fabrics and evaluation tests
- 1.5. Fabric manufacturability. The success of industrial manufacturing operations
 - 1.5.1. Textile manufacturability evaluation equipment and tests
 - 1.5.2. Behavior of textiles when cut, sewn and ironed
 - 1.5.3. Seam strength. Tensile and tearing methods
- 1.6. Other measures of seam behavior in fabrics
 - 1.6.1. Global standards applicable in the determination of seams
 - 1.6.2. Burst strength and measurement tests
 - 1.6.3. Fabric compression force and its influence on the human body

- 1.7. Fabric Hand. Interpretation by changing socio-cultural patterns
 - 1.7.1. Subjective measurement of textiles
 - 1.7.2. Evaluation according to geographic and interpretation variability
 - 1.7.3. Kawabata method. Objective evaluation of a traditionally subjective technique
- 1.8. Mechanical properties of fabrics
 - 1.8.1. Tensile strength, measuring equipment and parameters
 - 1.8.2. Flexural strength and its measurements
 - 1.8.3. Surface analysis. Coefficient of friction and roughness
 - 1.8.4. Thickness and grammage calculations
- 1.9. Static sag of fabrics
 - 1.9.1. Principles and objectives of the test
 - 1.9.2. Types of drapometers for measurement
 - 1.9.3. Analytical study of the fall. Indicators
- 1.10. Other textile analysis methods
 - 1.10.1. Compression module and voluminosity of fabrics
 - 1.10.2. Thermal module. Fabric-human body heat transfer
 - 1.10.3. Deformation of fabrics. Flexural module

Module 2. Manufacture of textile products for fashion use

- 2.1. The garment industry
 - 2.1.1. Structure of the garment industry
 - 2.1.2. Classification of sectors within the garment industry
 - 2.1.3. Products and industrial organization in the garment industry. Types
- 2.2. The manufacturing process. Types of seams
 - 2.2.1. Classification of seams according to typology
 - 2.2.2. Conventional seams with traditional machinery
 - 2.2.3. New types of textile joints. Technological Advances
- 2.3. Conventional sewing. Machinery and needle types
 - 2.3.1. Classification of sewing machinery according to applications and processes
 - 2.3.2. Needle typology. Classification, definition and uses according to type of garments
 - 2.3.3. Preparation and finishing machinery in garment making



- 2.4. Materials in the manufacturing process
 - 2.4.1. Stitches and sewing symbologies in the textile manufacturing process
 - 2.4.2. List of phases and time calculations
 - 2.4.3. Process replicability. Quality control principles
- 2.5. Organization and management of the cutting and sewing industry
 - 2.5.1. Management principles within the industry
 - 2.5.2. Design, marketing and financial department. Functionality and tasks
 - 2.5.3. Production and operations departments. Functionality and tasks
- 2.6. Finishing in fashion garments
 - 2.6.1. Cleaning and ironing operations. Typology
 - 2.6.2. Distinction, design and methods in labeling operations and certifications
 - 2.6.3. Packaging. Criteria and innovations in the packaging and wrapping of garments
- 2.7. Manufacture of conventional fashion garments
 - 2.7.1. Methodology of the knitwear manufacturing process
 - 2.7.2. Methodology of the manufacturing process in openwork fabrics
 - 2.7.3. Methodology of the sewing process in other specific fabrics
 - 2.7.3.1. Non woven fabrics, quilting, lining and printing
- 2.8. Manufacture of specific or luxury garments
 - 2.8.1. Methodology of the knitwear manufacturing process
 - 2.8.2. Methodology of the manufacturing process in openwork fabrics
 - 2.8.3. Methodology of the sewing process in other specific fabrics
 - 2.8.3.1. Non woven fabrics, quilting, lining and printing
- 2.9. Manufacture of knitted garments
 - 2.9.1. Methodology of the knitwear manufacturing process
 - 2.9.2. Methodology of the manufacturing process in openwork fabrics
 - 2.9.3. Methodology of the sewing process in other specific fabrics
 - 2.9.3.1. Non woven fabrics, quilting, lining and printing
- 2.10. *Fast Fashion* vs. *Slow Fashion*, Sectoral transformation. Paradigm shift in the garment industry
 - 2.10.1. Organization of the garment industry focused on *Fast Fashion*
 - 2.10.2. Organization of the garment industry according to *Slow Fashion*
 - 2.10.3. Industry adaptation to the new paradigm. Challenges, limitations and proposals

Module 3. Sustainability in the textile industry

- 3.1. Sustainability in the textile industry. Consumption and recycling
 - 3.1.1. The energy consumption of textiles
 - 3.1.2. Water consumption in the development of textiles
 - 3.1.3. Properties, durability and recycling issues
- 3.2. Environmental impact of textiles
 - 3.2.1. Environmental impact during the production process
 - 3.2.2. Environmental impact during the use of textiles
 - 3.2.3. Environmental impact during the post-consumer phase
- 3.3. Environmental impact of the fashion industry
 - 3.3.1. Excess production and high stocks. Problems
 - 3.3.2. Compulsive consumption of clothing in society and the problem of recycling
 - 3.3.3. Lack of legislation and selective collection of post-consumer textiles
- 3.4. Application of new criteria in consumption and post-consumption of textiles
 - 3.4.1. The textile problem
 - 3.4.2. International regulations
 - 3.4.3. New trends and challenges post 2025. Forecast
- 3.5. Sustainable development and circular economy
 - 3.5.1. Implementation of circular economy
 - 3.5.2. Critical services, barriers and risks for the transition from linear to circular
 - 3.5.3. Sustainable development goals
- 3.6. Environmental footprints of different textile compositions
 - 3.6.1. The environmental footprint of polyester
 - 3.6.2. Organic cotton as a solution to environmental problems
 - 3.6.3. Coarse fibers as new, resistant and biodegradable materials
- 3.7. Sustainable applications from the use of new fibers
 - 3.7.1. PLA or polylactic acid as a plastic substitute
 - 3.7.2. New applications from coconut and coconut fiber
 - 3.7.3. The potential of corn fibers



- 3.8. Biomaterials to minimize environmental impact
 - 3.8.1. Properties and characterization of biomaterials
 - 3.8.2. Use of biomaterials in the textile industry
 - 3.8.3. Biomaterials limitations
- 3.9. Sustainability of *Fast Fashion*
 - 3.9.1. The logistics and value chain of the *Fast Fashion* model
 - 3.9.2. Optimization, operations control and cost minimization
 - 3.9.3. Environmental and Social Impacts of *Fast Fashion* Methods
- 3.10. Sustainability of *Slow Fashion*
 - 3.10.1. The potential of second-hand fashion
 - 3.10.2. Local consumption and local production. New consumption and production patterns
 - 3.10.3. New *slow fashion* trends. Synergies and limitations

“Enroll now in this program and start enjoying an effective learning experience adapted to your study requirements, since it offers you didactic content in a wide range of textual and multimedia formats”

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.





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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 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 Diploma in Textile Value Chain guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Postgraduate Diploma in Textile Value Chain** 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 Diploma**, issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Textile Value Chain**

Official N° of Hours: **450 h.**



*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present
development language
virtual classroom



Postgraduate Diploma Textile Value Chain

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

Postgraduate Diploma Textile Value Chain