

Postgraduate Diploma Textile Dyer and Finisher



Postgraduate Diploma Textile Dyer and Finisher

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-textile-dyer-finisher

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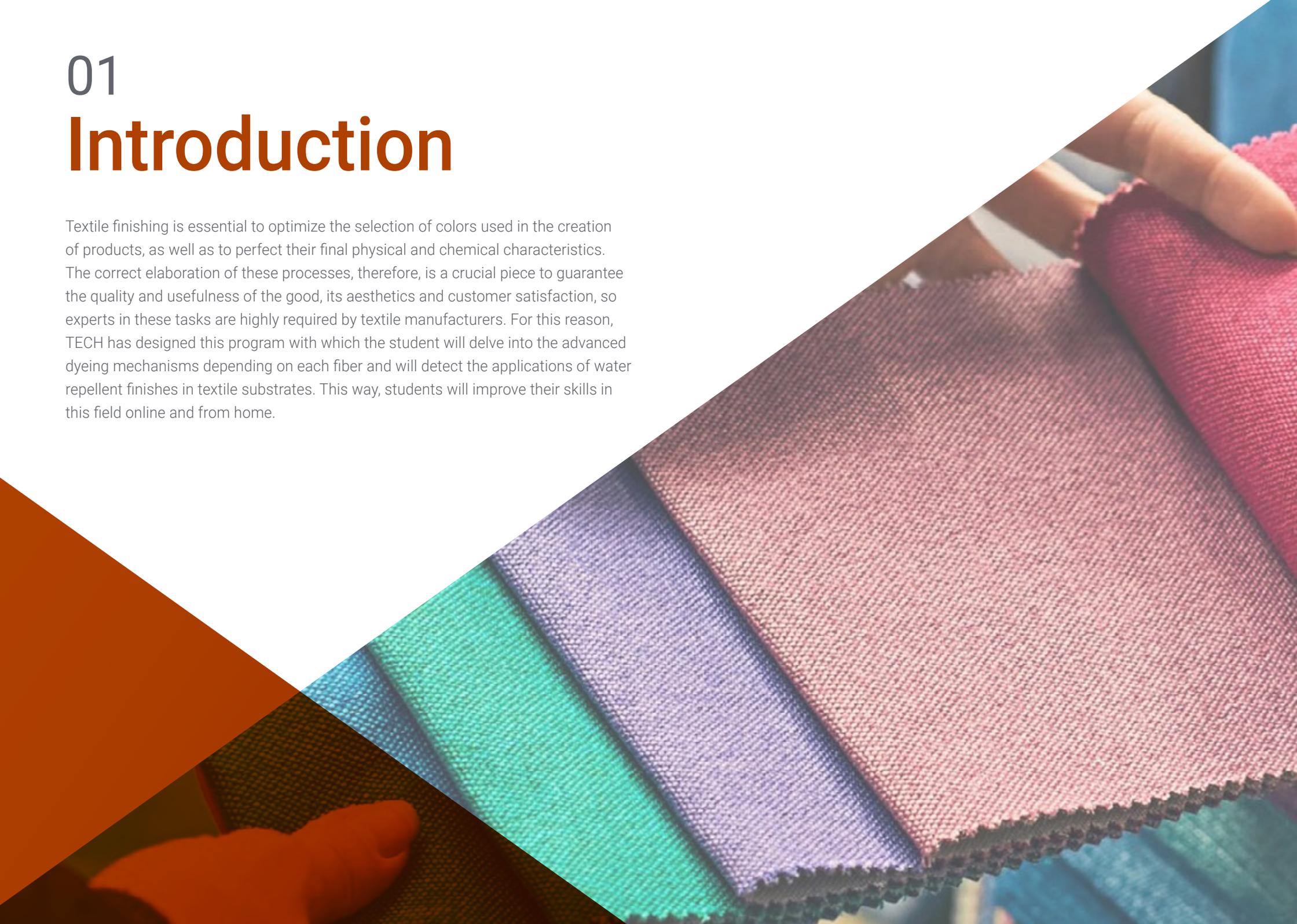
Certificate

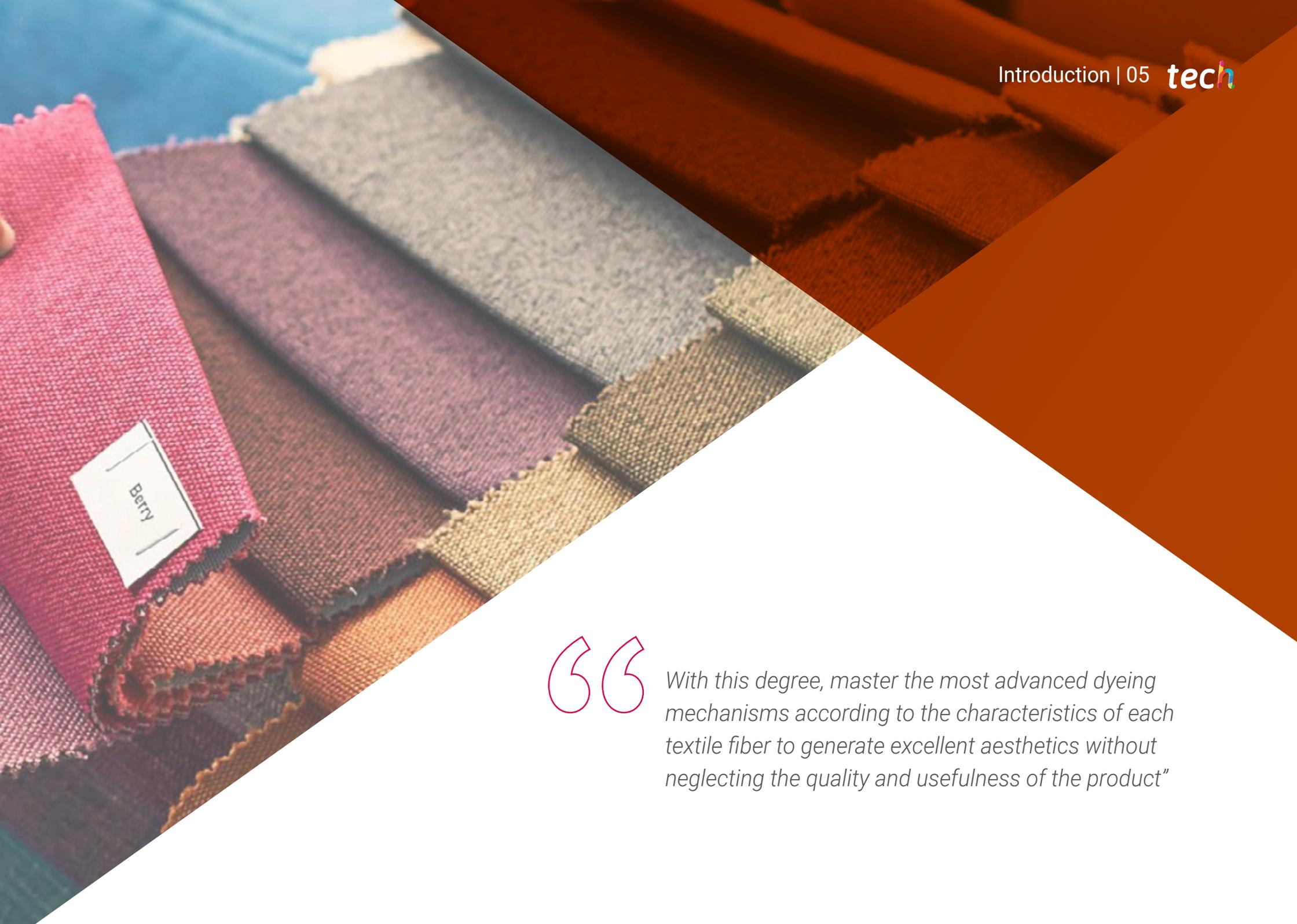
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01

Introduction

Textile finishing is essential to optimize the selection of colors used in the creation of products, as well as to perfect their final physical and chemical characteristics. The correct elaboration of these processes, therefore, is a crucial piece to guarantee the quality and usefulness of the good, its aesthetics and customer satisfaction, so experts in these tasks are highly required by textile manufacturers. For this reason, TECH has designed this program with which the student will delve into the advanced dyeing mechanisms depending on each fiber and will detect the applications of water repellent finishes in textile substrates. This way, students will improve their skills in this field online and from home.





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With this degree, master the most advanced dyeing mechanisms according to the characteristics of each textile fiber to generate excellent aesthetics without neglecting the quality and usefulness of the product”

Textile products are used in many areas of work, such as healthcare, automotive, industrial and fashion sectors. As a result, mechanical, chemical or dyeing finishes have become very important in order to adapt the product to the particular purposes for which it is to be used. Given that the durability of the product and its adequate resistance to phenomena such as fire or water will depend on these tasks, textile engineers are obliged to know the keys to these procedures in order to perform their tasks with the maximum efficiency.

In view of this situation, TECH has promoted the creation of this program, by means of which the student will identify the most advanced textile techniques to carry out first class finishes. During 6 intensive months of learning, the student will detect the processes of preparation of fabrics intended for industrial clothing and will establish the most efficient antiseptic and antistatic preparations currently in use. In addition, you will analyze the technological innovations inherent to the processes of creation of openwork, mesh and non-woven textile structures.

Thanks to the fact that this degree is developed through a 100% online methodology, students will be able to develop their own study schedules to achieve effective learning. In the same way, this program is taught by the best specialists in Textile Engineering, who have extensive experience in this field. Therefore, all the knowledge that the student will acquire will have full professional applicability.

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

- ◆ Case studies presented by experts in Engineering and Textile Production
- ◆ 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



After completing this program, students will be able to handle the application of water-repellent and flame-retardant finishes on textile substrates to design products for sectors such as sanitary or industrial”

“*Through a curriculum designed by the best experts in Textile Engineering, you will adopt the most advanced knowledge regarding the performance of finishing processes for textile products”*

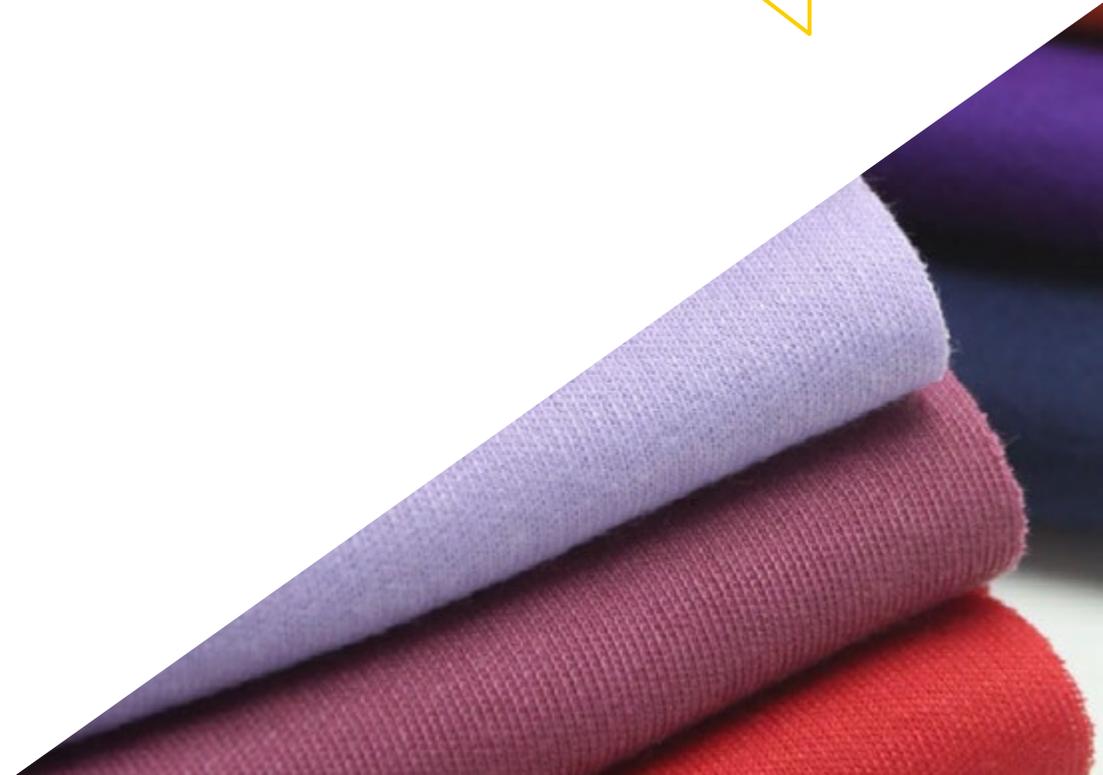
Acquire learning adapted to your study preferences through didactic formats such as video or interactive summaries.

This Postgraduate Diploma will enable you to identify the technological innovations used in the creation processes of openwork textile structures, mesh and nonwoven fabrics.

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. For this purpose, students will be assisted by an innovative, interactive video system created by renowned and experienced experts.



02

Objectives

This program has been designed with the idea to offer the student the most relevant and advanced knowledge of textile dyeing and finishing techniques. Throughout this academic experience, you will be able to identify the applications of smart yarns in industrial sectors and the sophisticated preparation procedures for dyeing, finishing and printing. You will obtain all of this knowledge by following the general and specific objectives outlined by TECH for this program.





“

*Achieve the goals TECH offers you
and be at the forefront of textile design
and production in just 6 months”*



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 scientific and technical criteria for the selection of suitable materials for the development of textile products in the fashion industry
- ◆ Identify and apply the sources of inspiration and the most innovative trends in the textile area
- ◆ Generate a transversal vision of textile structures with a multi-sectorial vision of their applications



Boost your professional growth in the textile industry through this intensive program that TECH puts at your disposal"





Specific Objectives

Module 1. Fibers and yarns for textile product design

- ◆ Identify textile fibers according to their morphology
- ◆ Develop textile products according to the basic characteristics of fibers
- ◆ Determine the processes to obtain fibers and the processes to produce yarns
- ◆ Analyze innovative fiber finishing processes and innovative yarn finishing processes

Module 2. Textile structures of openwork, mesh and non-woven fabrics

- ◆ Calculate and design textile structures related to the requirements of the textile industry
- ◆ Distinguish, apply and design processes according to the characteristics of the different textile structures
- ◆ Be able to develop research and innovation in the field of textile structures
- ◆ Integrate knowledge to face the complexity of different textile structures
- ◆ Identify and analyze textile structures from a technical approach

Module 3. Preparation processes in finishing and sizing, dyeing and printing

- ◆ Develop specialized knowledge on the application in preparation, bleaching and dyeing operations
- ◆ Analyze and distinguish the different processes that give specific characteristics to textiles
- ◆ Apply each specific process according to the nature of the textile itself and the characteristics and properties to be given to the textiles
- ◆ Professionalize in order to provide repeatability criteria for the application methods of sizing and finishing
- ◆ Promote a visual, tactile, organoleptic and practical evaluation of the effects of sizing and finishing on textiles
- ◆ Detect the influence of color on textiles and its importance at corporate and business level

03

Course Management

Thanks to TECH's tireless commitment to maintaining the high level of its degrees, this program has a teaching team made up of the best professionals in the world of textile design and production, who are actively involved in various positions related to these areas. These specialists are responsible for the realization of the didactic resources available throughout this academic period. As a result, the contents that the student will receive will enjoy a very complete validity.



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In order to provide you with the most applicable knowledge in this field, this degree is taught by specialists with extensive experience in design and textile production”

Management



Dr. González López, Laura

- ♦ 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

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



04

Structure and Content

The syllabus of this program is made up of 3 modules through which the student will obtain the most advanced knowledge of textile dyeing and finishing techniques. The didactic resources that you will have at your disposal throughout this program are present in a wide range of textual and multimedia formats. TECH's intention is to provide you with 100% online learning, accessible 24 hours a day and adapted to your study preferences.





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The 100% online methodology characteristic of this degree will allow you to study from your own home to optimize your learning”

Module 1. Fibers and yarns for textile product design

- 1.1. Textile Fibers
 - 1.1.1. Nature of Textile Fibers
 - 1.1.2. High performance fibers
 - 1.1.3. Identification, classification and description of textile fibers
 - 1.1.4. Physical and chemical morphology of textile fibers and their specific characteristics
- 1.2. Textile fiber obtaining methods
 - 1.2.1. Methodology and specific technologies for the production of fibers according to their nature
 - 1.2.2. Physical Method
 - 1.2.3. Chemical Method
- 1.3. Industrial processes in yarn manufacturing
 - 1.3.1. The carding process and the obtaining of nappa
 - 1.3.2. The steps of drafting and determination of parameters
 - 1.3.3. Spinning types in the industrial process
- 1.4. Innovations in the finishing process during fiber extraction
 - 1.4.1. Types of fiber finishes and their function
 - 1.4.2. Application and functionality of microcapsules in the spinning process
 - 1.4.3. Innovations in the finishing process during fiber extraction
- 1.5. Innovations in the finishing process during yarn manufacturing
 - 1.5.1. Application of finishes during the different industrial steps
 - 1.5.2. Transformation of basic yarn characteristics with the application of finishes
 - 1.5.3. Specific applications and techniques for intrinsically modified yarns
- 1.6. High performance fibers
 - 1.6.1. Specifications and characteristics of high mechanical performance fibers
 - 1.6.2. Specifications and characteristics of high thermal performance fibers
 - 1.6.3. Innovations in the field of nanofibers and biofibers
- 1.7. Advanced techniques in spinning processes to obtain yarns. New fiber developments
 - 1.7.1. Innovations in modified natural fiber yarns
 - 1.7.2. New natural textile fibers of recent discovery and/or recovery of their use in industry
 - 1.7.3. Technological innovations for the spinning of staple, regenerated and recovered fibers

- 1.8. Specific wool fiber processes and spinning processes
 - 1.8.1. The wool cleaning process and its environmental problems
 - 1.8.2. Spinning processes of wool fibers
 - 1.8.3. Specific applications and techniques in the use of wool as fiber
- 1.9. Fancy yarns for fashion and home textile applications
 - 1.9.1. Process of obtaining fancy yarns
 - 1.9.2. Applications of fancy yarns in the fashion industry. Examples:
 - 1.9.3. Applications of fancy yarns in the home textile sector. Examples:
- 1.10. Smart Yarns (Smart Yarns)
 - 1.10.1. Types of smart yarns
 - 1.10.2. Smart yarn applications in industrial sectors
 - 1.10.3. High-performance technologies and applications with intelligent yarns

Module 2. Textile structures of openwork, mesh and non-woven fabrics

- 2.1. Textile structures
 - 2.1.1. Basic characteristics. Technologies and methods
 - 2.1.2. Mechanical characteristics. Methods and results
 - 2.1.3. Chemical characteristics. Methods and results
- 2.2. Methods of obtaining openwork textile structures. Analysis
 - 2.2.1. Looms and their design
 - 2.2.2. Textile structures of openwork. Analysis and Design
 - 2.2.3. Fabrics and Jacquard technology. Identification and analysis
- 2.3. Methods used to obtain mesh or knitted textile structures. Analysis
 - 2.3.1. Processes and weaving looms. Identification and classification
 - 2.3.2. Mesh fabrics. Characteristics and structural parameters
 - 2.3.3. Mesh structures and range of technical applications according to the technology used. Identification
- 2.4. Methods used to obtain nonwoven fabrics. Analysis
 - 2.4.1. Nonwoven fabrics. Key Features
 - 2.4.2. Nonwoven fabric forming and processing technologies
 - 2.4.3. Technical application ranges for nonwoven fabrics



- 2.5. Innovations in the industrial sector of weaving technologies
 - 2.5.1. New machinery developments in the last decades for the design of openwork fabrics
 - 2.5.2. Openwork fabrics. Multi-sectoral approach within the industry
 - 2.5.3. Sustainability. Producers of openwork textiles, utilization of pre-consumer remnants
- 2.6. Innovations in the industrial sector of netting technologies
 - 2.6.1. Changes and innovations in netting machinery
 - 2.6.2. Hightech applications of mesh structures in highly complex industrial sectors
 - 2.6.3. Adaptation of netting industries to environmental requirements
- 2.7. Development and technological innovation in the field of nonwovens
 - 2.7.1. Development of highly specific machinery for the utilization of leftovers
 - 2.7.2. Nonwovens as a solution for the adaptation and transformation of the textile industry
 - 2.7.3. Hightech applications of nonwovens in complex and advanced technology sectors
- 2.8. Design of openwork textile structures
 - 2.8.1. Parameter settings for designing openwork fabrics
 - 2.8.2. Determination of applications for specific designs of openwork
 - 2.8.3. Recirculating design of openwork textile structures
 - 2.8.3.1. Key aspects for reintroducing textiles back into the value chain
- 2.9. Design of textile mesh structures
 - 2.9.1. Setting the parameters for designing mesh fabrics
 - 2.9.2. Determination of applications for specific mesh designs
 - 2.9.3. Recirculating design of textile mesh structures
 - 2.9.3.1. Key aspects for reintroducing textiles back into the value chain
- 2.10. Design of nonwoven fabrics
 - 2.10.1. Parameter settings for designing nonwoven fabrics
 - 2.10.2. Determination of applications for specific nonwoven fabrics designs
 - 2.10.3. Recircular design of nonwoven fabrics
 - 2.10.3.1. Key aspects for reintroducing textiles back into the value chain

Module 3. Preparation processes in finishing and sizing, dyeing and printing

- 3.1. Dyeing, finishing and printing preparation processes
 - 3.1.1. Classification of textile finishing. Differentiation according to type
 - 3.1.2. Ecofinishing operations within the production line for textile products of textile products
 - 3.1.3. Processes for the preparation of fabrics intended for industrial garment manufacturing and associated sub-processes
- 3.2. Products and processes used in sizing. Classification
 - 3.2.1. Washing and optical brightening agents
 - 3.2.2. Additives, teas and softeners according to their nature
 - 3.2.3. The gluing process and its function
- 3.3. Products and processes for crease-resistant, shrink-resistant and stain-resistant coatings
 - 3.3.1. Processes on cotton, viscose and wool fabrics
 - 3.3.2. Water- and oil-repellent (stain-resistant) finishes
 - 3.3.3. Coating Wash and Wear
- 3.4. Waterproof, water-repellent and flame-retardant coatings
 - 3.4.1. Waterproof coatings on textile substrates. Applications
 - 3.4.2. Water repellent coatings on textile substrates. Applications
 - 3.4.3. Waterproof coatings on textile substrates. Applications
- 3.5. Antiseptic and anti-static preparations
 - 3.5.1. Fungicide and anti-mildew preservatives. Products
 - 3.5.2. Insecticide preservatives. Products
 - 3.5.3. Anti-static agents. Classification
- 3.6. Matting, fulling and charring operations
 - 3.6.1. Process and products for matting
 - 3.6.2. Fulling process and products
 - 3.6.3. Charring process and products
- 3.7. Complementary operations to finishing
 - 3.7.1. Drying operations
 - 3.7.2. Transitory and permanent tissue widening operations
 - 3.7.3. Condensation operations



- 3.8. Chemical and mechanical finishing
 - 3.8.1. Modifying, additive, crease-resistant, waterproof, water-repellent, flame-retardant, fire-retardant and antiseptic finishes
 - 3.8.2. Fabric finishing
 - 3.8.2.1. Calendering, palmering, pressing, steaming, decatizing, harnessing, shearing, shrink finishing, pleating, folding and Pilling elimination
 - 3.8.3. Differences between sizing and finishing of protein fibers, cellulosic fibers, and synthetic fibers
- 3.9. Processes and operations in dyeing
 - 3.9.1. Preparation of substrates for dyeing
 - 3.9.2. Dyeing products and processes depending on the fiber being treated
 - 3.9.3. Environmental impact of dyeing processes and improvement innovations
- 3.10. Processes and operations in textile printing
 - 3.10.1. Types of textile printing
 - 3.10.2. Adequacy of textile printing according to textile substrate
 - 3.10.3. Printing innovations over the last decades

“ Take this degree and enjoy a pleasant and effective learning experience through didactic contents available in a wide range of textual and multimedia supports”



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.

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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.

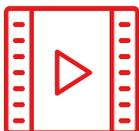
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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.



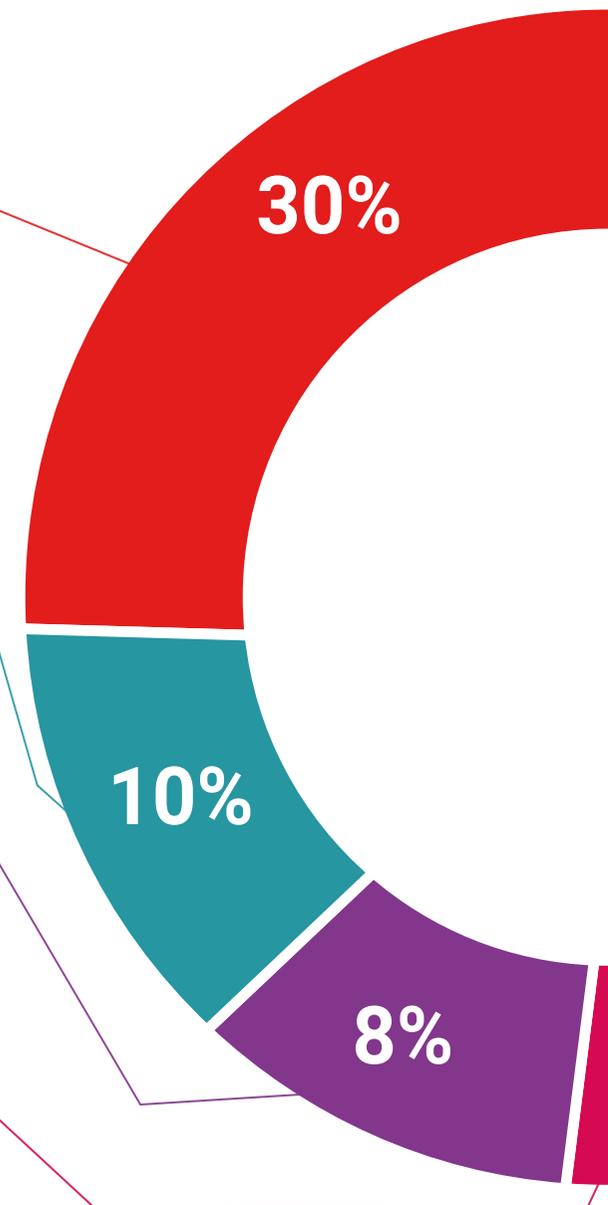
Practising Skills and Abilities

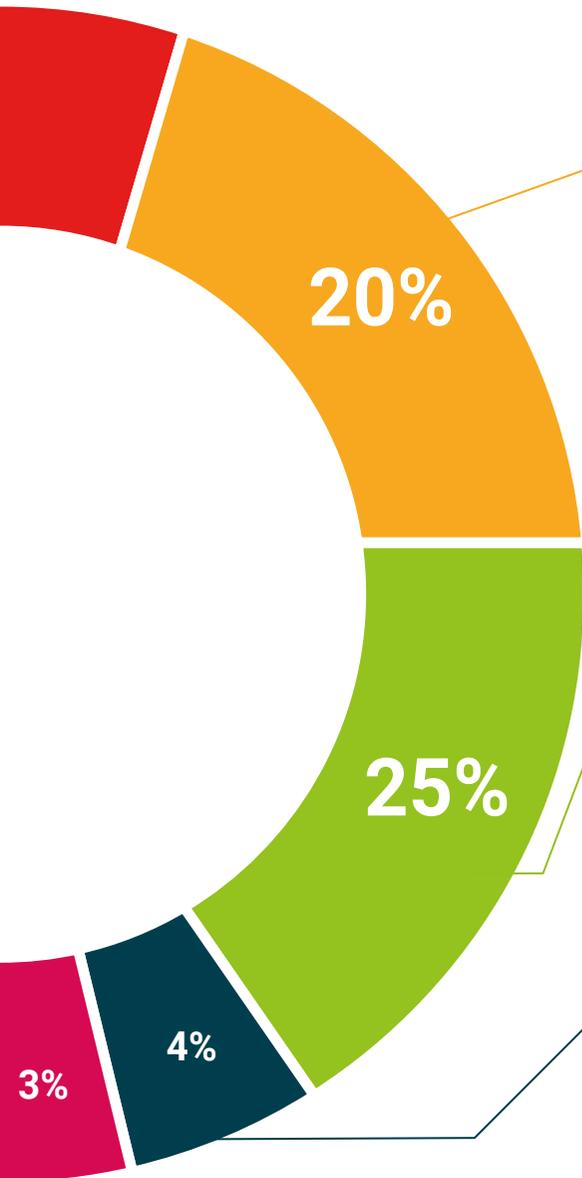
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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 Dyer and Finisher guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.





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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 Diploma in Textile Dyer and Finisher** 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.

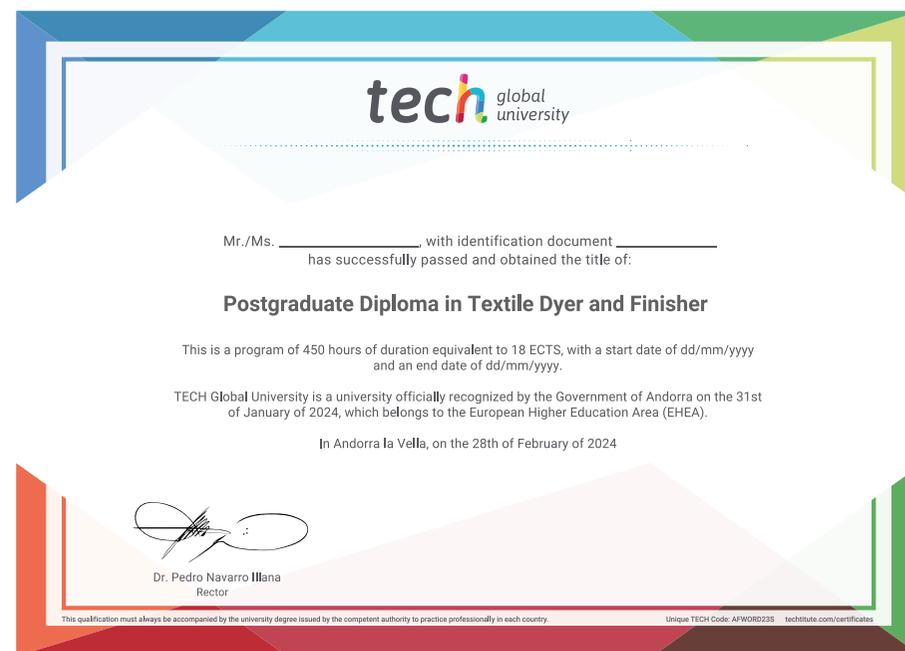
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Textile Dyer and Finisher**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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



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