

# Postgraduate Certificate User Interface Programming and Design



## Postgraduate Certificate User Interface Programming and Design

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

Website: [www.techtute.com/in/information-technology/postgraduate-certificate/user-interface-programming-design](http://www.techtute.com/in/information-technology/postgraduate-certificate/user-interface-programming-design)

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# 01

# Introduction

Web pages that are visited almost every day must be intuitive and functional. Unconsciously, this generates a satisfying experience, as it allows the user to find what they need quickly and with little effort. This is what user experience is all about, and this program generates specialized knowledge in the design of these experiences. This program addresses research and analysis with respect to user experience through the evaluation of subjective opinions, heuristic evaluation and concrete analysis tools, among other methods. It then tackles the management of prototyping phase using the appropriate tools, among other topics of interest.





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*In this Postgraduate Certificate you will be able to combine the efficiency of the most advanced learning methods with the flexibility of a program created to adapt to your schedule, without sacrificing quality”*

The objective of this Postgraduate Certificate is to study and analyze the behavior of users, their interactions with the different systems and the impact these systems have on their lives and decision making. It is therefore necessary to understand user needs in order to create satisfying and meaningful experiences. In this way, a UX designer must apply different methods, techniques and tools to find solutions to specific problems and offer intuitive navigation to users.

In turn, it explores the design of interfaces and information architectures addressing the concept of usability (to make them understandable, concise and quick to learn), as well as accessibility (so that they can be used by the maximum number of users possible, paying special attention to people with disabilities). Finally, it examines the relationship between SEO and UX and establishes how to develop style guides taking into account their various components.

UX design is a truly essential factor in any digital product or service and this area of great potential is constantly evolving due to the frequent changes and updates in the relevant technologies.

This Postgraduate Certificate has been created by a team of expert teachers with multi-faceted skillsets and a wealth of experience and specialized knowledge in their respective fields. As it is a 100% online program, the student will not have to neglect their personal or professional commitments. At the end of the program, students will have updated their knowledge and will be in possession of a prestigious Postgraduate Certificate that will allow them to advance personally and professionally.

This **Postgraduate Certificate in User Interface Programming and Design** contains the most complete and up-to-date program on the market. Its most notable features are:

- ◆ The development of practical case studies presented by experts in User Interface Programming and Design
- ◆ The graphic, schematic, and practical contents which they contain, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be undertaken to improve learning
- ◆ A 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

“*Deepen your knowledge in the field of computer technologies by incorporating the most advanced aspects of this area of work*”

“*All the subjects and areas of knowledge have been compiled in a complete and up-to-date syllabus, in order to bring the student to the highest theoretical and practical level*”

The program's teaching staff includes professionals from the sector who pour their work experience into this Postgraduate Certificate, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive learning designed for real situations.

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

*Succeed with the best and acquire the knowledge and skills you need to embark on User Interface Programming and Design.*

*A unique opportunity to specialize in User Interface Programming and Design from renowned professionals with years of experience in the sector.*



# 02 Objectives

Through a work approach that is fully adaptable to the student, this Postgraduate Certificate will progressively lead them to acquire the skills that will propel them to a superior professional level. The objective of this program is to specialize professionals in User Interface Programming and Design, with the necessary knowledge and skills to perform their work, using the most advanced protocols and techniques available. A unique program designed by professionals with extensive experience in the sector.







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*A complete and cutting-edge program that will allow you to progressively and completely acquire the knowledge you need to work in this sector”*



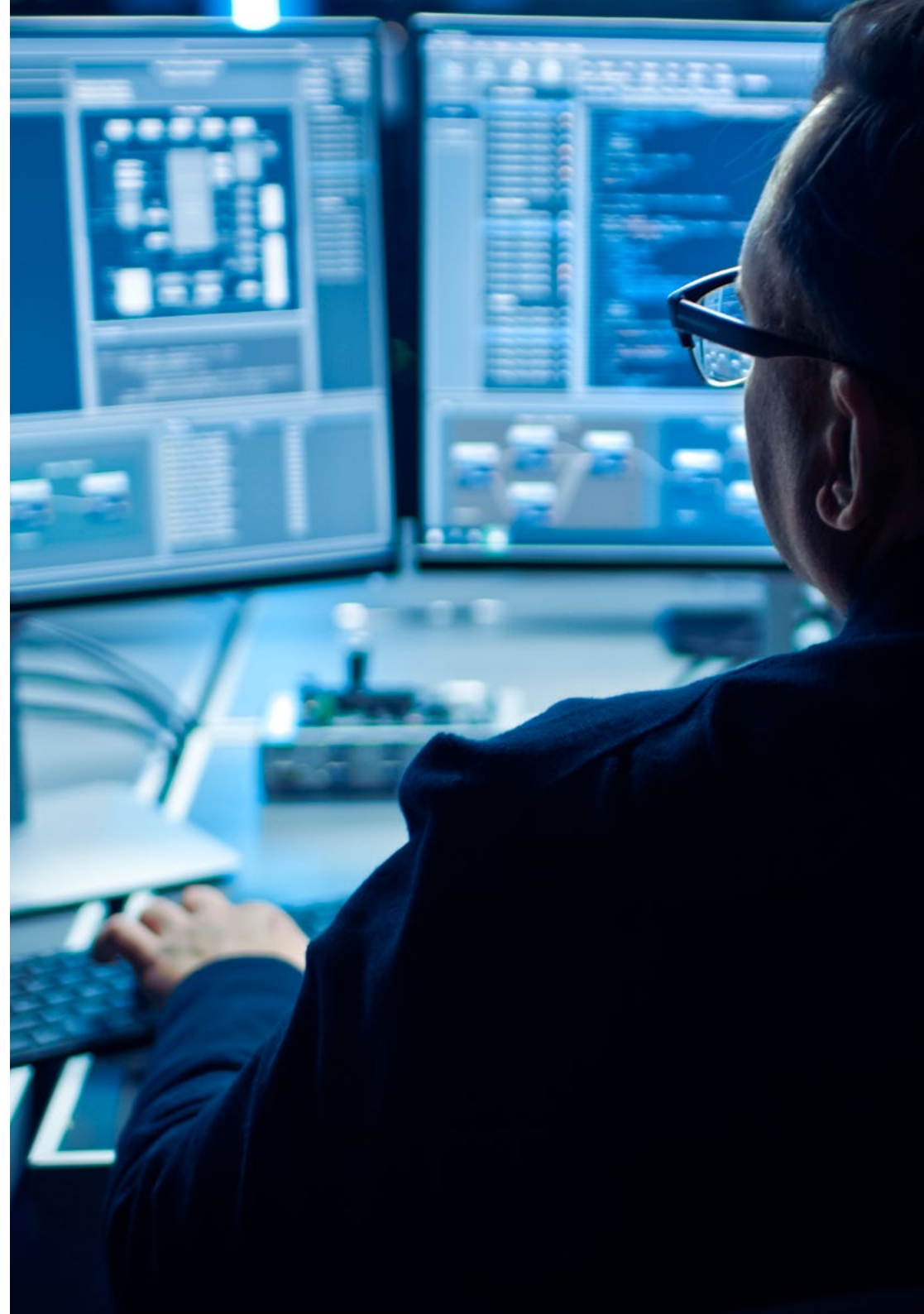
## General Objectives

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- ◆ Analyze the importance of user experience as an area that successfully encompasses technology, design and interaction
- ◆ Implement user experience design phases
- ◆ Apply the main research tools, methods and techniques to design user-centered digital experiences
- ◆ Create attractive, usable and accessible digital environments to offer satisfactory user experience



*This Postgraduate Certificate provides a valuable addition to the prior studies of any website engineer seeking a high-quality, specialized qualification in User Interface Programming and Design"*





## Specific Objectives

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- ◆ Detect user needs and behavioral patterns on the web
- ◆ Interpret analytical data to make business decisions
- ◆ Apply different user-centric marketing methodologies and tools
- ◆ Identify and implement usability principles to design effective and efficient applications
- ◆ Consider potential user disabilities to provide an accessible environment
- ◆ Develop the different theories, principles and types of web design
- ◆ Detail the different prototyping methods
- ◆ Anticipate interface errors and learn how to react when they occur
- ◆ Organize and prioritize information on the web
- ◆ Offer an intuitive browsing experience to users
- ◆ Gain a vision of UX Writing beyond writing
- ◆ Establish the relationship between user experience and organic positioning (SEO)
- ◆ Determine the objectives and the process to develop style guides

# 03

## Course Management

In line with its maxim of offering an elite education for all, TECH counts on renowned professionals so that the student acquires a solid base of knowledge in User Interface Programming and Design. This Postgraduate Certificate has a highly qualified team with extensive experience in the sector, who will offer the best tools for students to develop their skills during the program. In this way, students have the guarantees they need to specialise at an international level in a booming sector that will catapult them to professional success.





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*A comprehensive and highly relevant course for the IT professional, which will allow you to compete among the best in the industry”*

## Management



### Mr. Gris Ramos, Alejandro

- ♦ Director of Persatrace, web development and digital marketing agency
- ♦ Director of Club de Talentos
- ♦ Computer Engineer UNED
- ♦ Master's Degree in Digital Teaching and Learning Tech Education
- ♦ Master's Degree in High Abilities and Inclusive Education
- ♦ Business Development Director at Alenda Golf
- ♦ Director of Web Applications Engineering Department at Brilogic
- ♦ Web programmer at Grupo Ibergest
- ♦ Software/web programmer at Reebok Spain



## Professors

### Mr. Méndez Martínez, Brandon

- ◆ Web design and development - HIADIS Graduated in Multimedia Engineering, University of Alicante
- ◆ Natural Language Processing (NLP) - GPLSI (University of Alicante)
- ◆ Master's Degree in Web Services and Applications Development from the University of Alicante
- ◆ "Analysis of gamification techniques to learn complex subjects through collaborative applications" - Technical Committee on Learning Technology Bulletin
- ◆ "Gramá: a web application for learning and generating creative language" - INTED2017 Proceedings
- ◆ Research in Human Language Technologies (TLH) - GPLSI (University of Alicante)

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*An excellent teaching staff  
for professionals who want to  
improve in their career”*

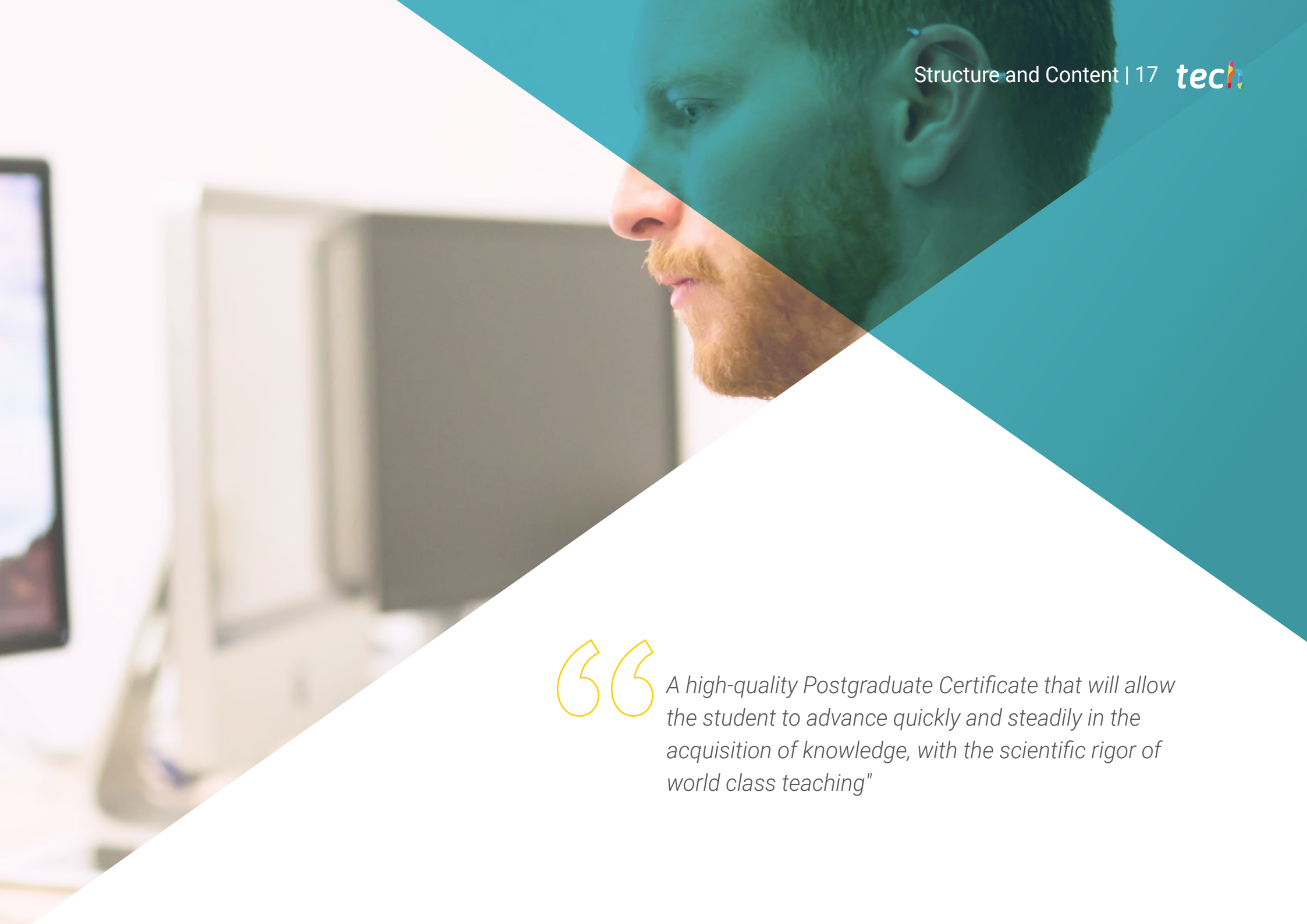
# 04

## Structure and Content

The syllabus has been designed based on educational efficiency, carefully selecting the contents to offer a comprehensive course, which includes all the fields of study that are essential to achieve real knowledge of the subject. Including the latest updates and aspects of the field. As such, the syllabus consists of modules that offer a broad overview of User Interface Programming and Design. From the first module, students will see their knowledge expanding, which will enable them to develop professionally, knowing that they can count on the support of a team of experts.





A photograph of a man with a beard looking at a computer screen in a classroom setting. The image is partially obscured by a teal diagonal overlay.

“ A high-quality Postgraduate Certificate that will allow the student to advance quickly and steadily in the acquisition of knowledge, with the scientific rigor of world class teaching”

## Module 1. User Interface Design and Programming

- 1.1. User Experience
  - 1.1.1. User Experience (UX)
  - 1.1.2. Interface Design (UI)
  - 1.1.3. Interaction Design (IxD)
  - 1.1.4. Context and New Paradigms
- 1.2. User Interface Design
  - 1.2.1. Design and UX
  - 1.2.2. Web Design Psychology
  - 1.2.3. Design Thinking
  - 1.2.4. Types of Web Design
    - 1.2.4.1. Fixed Design
    - 1.2.4.2. Elastic Design
    - 1.2.4.3. Liquid Design
    - 1.2.4.4. Responsive Design
    - 1.2.4.5. Flexible Design
  - 1.2.5. Design System & Atomic Design
- 1.3. UX or User Research
  - 1.3.1. UX Research
  - 1.3.2. Importance and Process
  - 1.3.3. Research and Analysis
  - 1.3.4. Heuristic Evaluation
  - 1.3.5. Eye Tracking
  - 1.3.6. Test A/B
  - 1.3.7. Crazy Egg
  - 1.3.8. Card Sorting
  - 1.3.9. Customer Journey
  - 1.3.10. Other Techniques
- 1.4. UX Writing
  - 1.4.1. UX Writing
  - 1.4.2. UX Writing vs. Copywriting
  - 1.4.3. Uses and Benefits
  - 1.4.4. Microcopy
  - 1.4.5. Web Structure



- 1.5. Interaction Design and Web Prototyping
  - 1.5.1. Prototyping Phase
  - 1.5.2. Methods
    - 1.5.2.1. Sketches
    - 1.5.2.2. Wireframes
    - 1.5.2.3. Mockups
  - 1.5.3. Browsing Flows
  - 1.5.4. Interaction
  - 1.5.5. Managing Online Tools
- 1.6. Usability
  - 1.6.1. Impact of Usability on User Experience
  - 1.6.2. Metrics
  - 1.6.3. Tests
    - 1.6.3.1. Internal Usability Test
    - 1.6.3.2. Unmoderated Remote Usability Testing
    - 1.6.3.3. Moderated Remote Usability Testing
  - 1.6.4. Assessment Tools
- 1.7. Accessibility
  - 1.7.1. Web Accessibility
  - 1.7.2. Beneficiaries
  - 1.7.3. Disabilities
    - 1.7.3.1. Visual Impairment
    - 1.7.3.2. Hearing Impairment
    - 1.7.3.3. Motor Disability
    - 1.7.3.4. Speech Impairment
    - 1.7.3.5. Cognitive Impairment
  - 1.7.4. Accessibility Guidelines
    - 1.7.4.1. WCAG 2.1 and Priorities
    - 1.7.4.2. Perceptible
    - 1.7.4.3. Operable
    - 1.7.4.4. Comprehensible
    - 1.7.4.5. Robust
  - 1.7.5. Validation Tools and Techniques
- 1.8. Information Architectures
  - 1.8.1. Organization Systems
  - 1.8.2. Labeling Systems
  - 1.8.3. Browsing Systems
  - 1.8.4. Search Systems
- 1.9. SXO: UX and SEO
  - 1.9.1. Similarities between UX and SEO
  - 1.9.2. SEO Factors
  - 1.9.3. Impact and Benefits of Optimizing UX for SEO
  - 1.9.4. UX Advice to Improve SEO
- 1.10. Style Guides
  - 1.10.1. Objectives
  - 1.10.2. Context
  - 1.10.3. Color Palettes
  - 1.10.4. Typography
  - 1.10.5. Iconography
  - 1.10.6. Components
    - 1.10.6.1. Basic Components
    - 1.10.6.2. Complex Components
  - 1.10.7. Layout
  - 1.10.8. Consistency and Identity
  - 1.10.9. Utility Extension
  - 1.10.10. Examples



*A unique specialization program that stands out due to the quality of its contents and its excellent teaching staff"*

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



### 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 student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

The case method has been the most widely used learning system among the world's leading Information Technology 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 that you are presented with in the case method, an action-oriented learning method. Throughout the course, students 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 different teaching elements in each lesson.

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

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.





In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

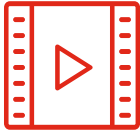
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

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



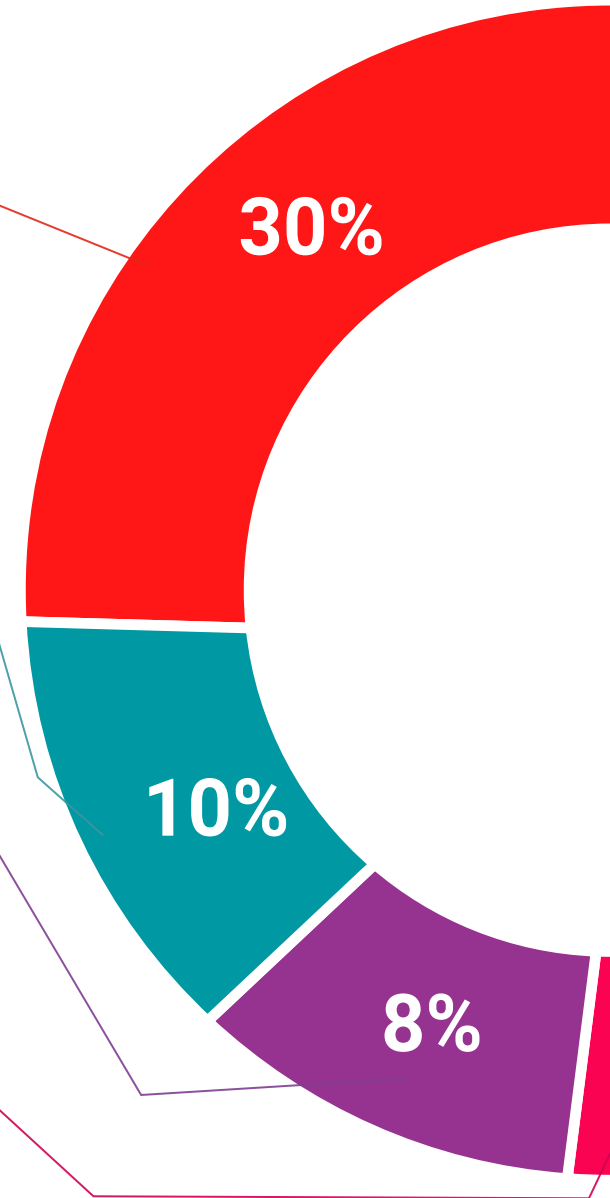
### Practising Skills and Abilities

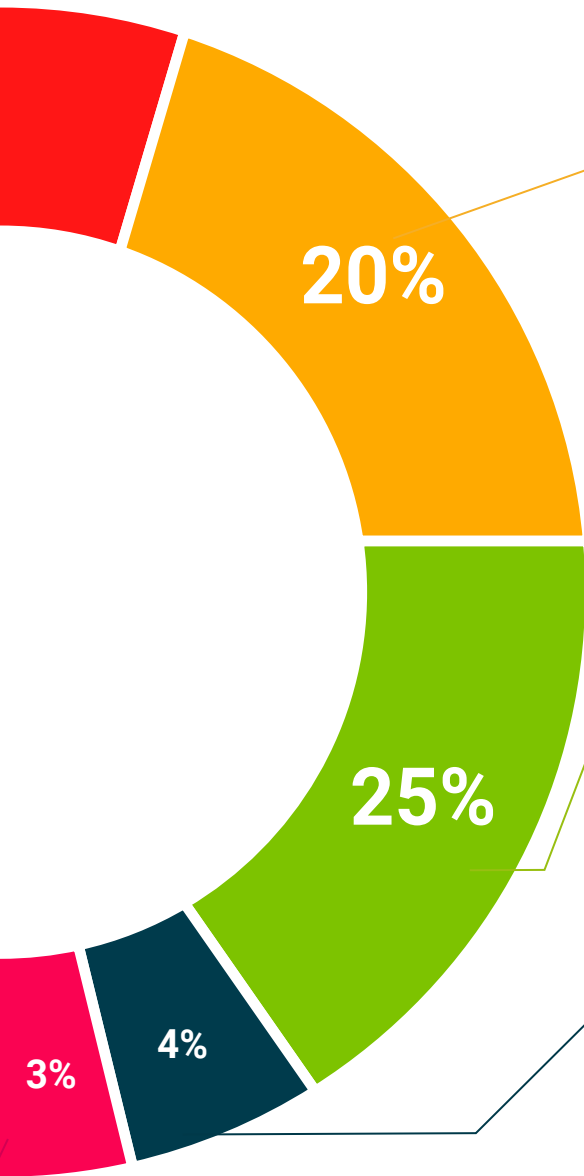
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



06

# Certificate

The Postgraduate Certificate in User Interface Programming and Design guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



“

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

This **Postgraduate Certificate in User Interface Programming and Design** 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 Certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate 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 User Interface Programming and Design**

Official N° of hours: **150 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 Certificate

User Interface  
Programming  
and Design

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

# Postgraduate Certificate User Interface Programming and Design