

# Postgraduate Certificate Front-End Programming



## Postgraduate Certificate Front-End Programming

- » 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/front-end-programming](http://www.techtute.com/in/information-technology/postgraduate-certificate/front-end-programming)

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# 01

# Introduction

In a world where the visual is what attracts the most attention, the role of *front-end* programmers is essential, since they are in charge of developing the visual part of a website. They are in charge of designing the structure, typography, colorimetry, images, banners, etc. Their work is really important, since for a website to work it has to have an attractive design. This online program specializes the graduate in the HTML and CSS languages to perfection, so that he or she has some knowledge of design and composition theories, and so that the layout of the page elements is more effective.





“

*Expand your knowledge, up to a specialized level, of Front-end programming with all the components and best practices"*

A web developer encompasses multiple skill sets that translate into different specialties. The three most common terms used to name these specialties generically are: *Full Stack*, *Back-end* y *Front-end*. This last one works on the client side, in the browser, on what you see. It mainly deals with the external components of the website or application.

Although *Front-end* developers are often associated with the principles of design and page structure, their work goes beyond that. In this program, the student will learn essential functions such as debugging and static analysis of code. You will also gain the knowledge necessary to create an intuitive and responsive design, and skills in the use of *Front-end* development tools, including *Frameworks*, automation, CMS, APIs and version control systems.

In addition, as it is an online program, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access a rich content that will help them reach the elite of programming at any time of the day, combining, at their own pace, their work and personal life with their academic life.

This **Postgraduate Certificate in Front-End Programming** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of case studies presented by experts in *Front-end* Programming
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions for experts and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*You will be able to generate specialized knowledge about design systems"*

“Generate advanced knowledge about tools such as preprocessors to give superpowers to CSS and design systems”

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, 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 education programmed to learn in real situations.

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

Develops the key elements of an HTML document around the topic of semantic tags and their benefits.

It delves into the key concepts of CSS such as the box model, positioning, selectors, specificity, Flexbox, Grid, among others.



# 02 Objectives

Developing specialized knowledge on the fundamentals of the web, correctly recognizing the syntax of HTML and CSS languages, cloning a website or creating another with *Bootstrap*, are some of the objectives of this Postgraduate Certificate, which aims to promote the use of modern *Front-end* development techniques and tools and develop criteria for good web development practices, among others.





## WEBSITE

HOME / ABOUT / STORIES / SHOP / CONTACT US

Start  
small  
Think big

START

Branding is defin  
or making a  
read

search

“

*The purpose of the module is to develop the necessary skills of a programmer to cope with any user interface"*



## General Objectives

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- ♦ Develop specialized knowledge on the fundamentals of the Web
- ♦ Encourage the use of modern *Front-end* development tools and techniques
- ♦ Correctly recognize the syntax of HTML and CSS languages
- ♦ Develop Web Development Best Practices criteria



*You will be able to incorporate CSS preprocessor and clone websites with the keys that this online program will provide you"*





## Specific Objectives

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- ◆ Identify and understand the correct syntax of HTML and CSS
- ◆ Explore the various elements of HTML
- ◆ Determine the adaptive design approach
- ◆ Employ presentation formatting to web pages by applying cascading style sheets
- ◆ Incorporate CSS preprocessor
- ◆ Establish the benefits of using a preprocessor
- ◆ Generate specialized knowledge about design systems
- ◆ Establish design system usage criteria
- ◆ Clone website
- ◆ Generate a website with *Bootstrap*

03

# Course Management

TECH, in its maxim of offering an elite education for all, has experts in application development and language. Therefore, this Postgraduate Certificate brings together highly qualified professionals with extensive experience in the sector. In this way, the student will be able to increase *Front-end* programming skills.





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*Acquire the necessary skills and learn from experts to become the programming elite"*



## Management



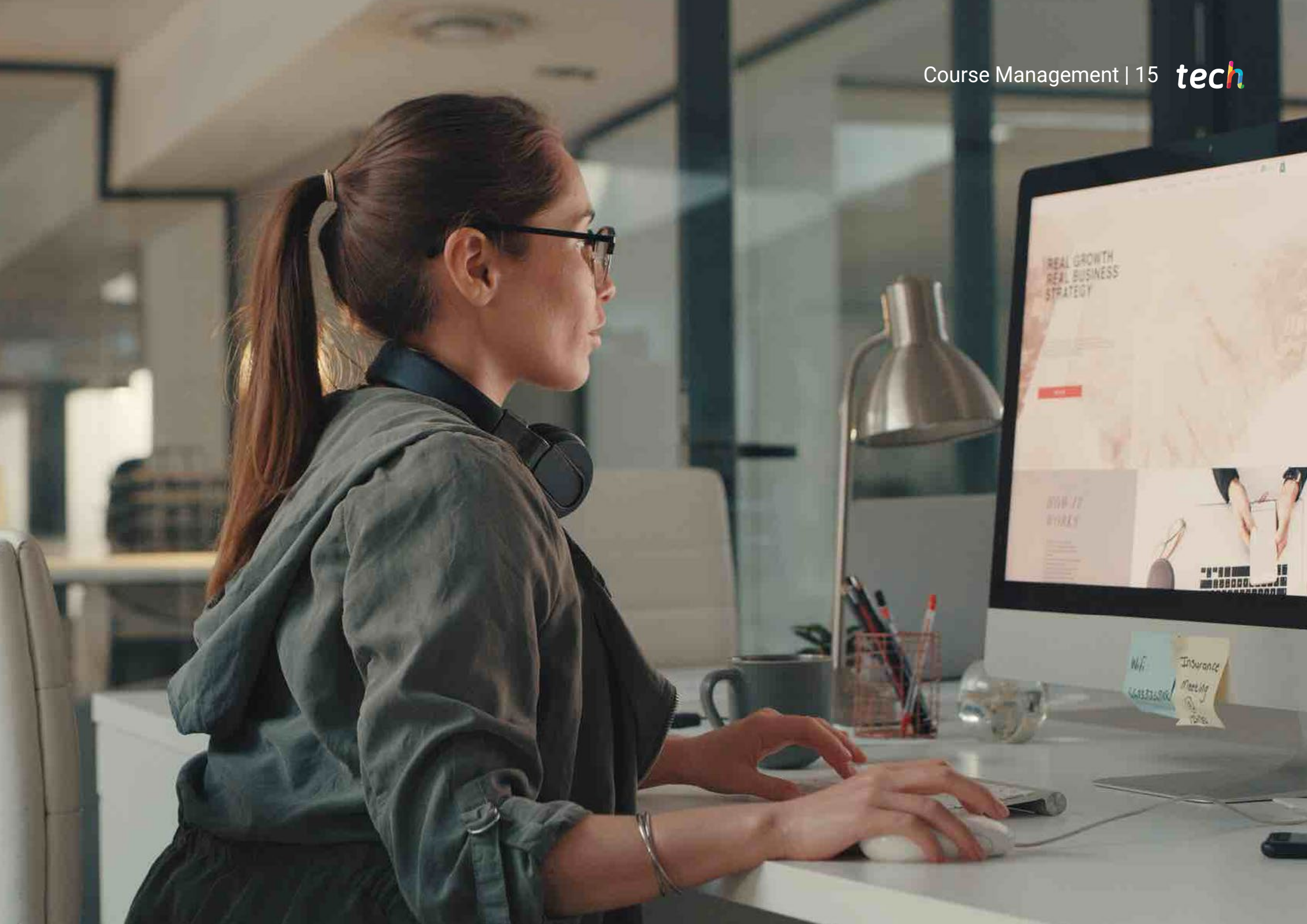
### Mr. Olalla Bonal, Martín

- ♦ Technical sales blockchain specialist en IBM
- ♦ Blockchain Hyperledger and Ethereum Architecture Manager at Blocknitive
- ♦ Director of the Blockchain area at PSS Information Technologies.
- ♦ Chief Information Officer at ePETID - Global Animal Health
- ♦ IT Infrastructure Architect at Bankia - wdoIT (IBM - Bankia Join Venture)
- ♦ Project director and manager at Daynet integral services
- ♦ Director of Technology at Wiron Construcciones Modulares
- ♦ Head of IT Department at Dayfisa
- ♦ Head of IT department at Dell Computer, Majsa and Hippo Viajes
- ♦ Electronics Technician in IPFP Juan de la Cierva

## Professors

### Mr. Frias Favero, Pedro Luis

- ♦ Co-founder and CTO at Swearit
- ♦ COO at Key Identification
- ♦ Degree in Industrial Engineering from Yacambú University, in Venezuela.
- ♦ Expert in Blockchain and Decentralized Applications at the University of Alcalá, Spain



# 04

## Structure and Content

The syllabus has been designed based on the requirements of computer science applied to *Front-end* development in programming, therefore establishing a curriculum whose module offers a broad perspective of HTML language, from the CSS cascading style sheet to the box model, through positioning and adaptive design, among others.



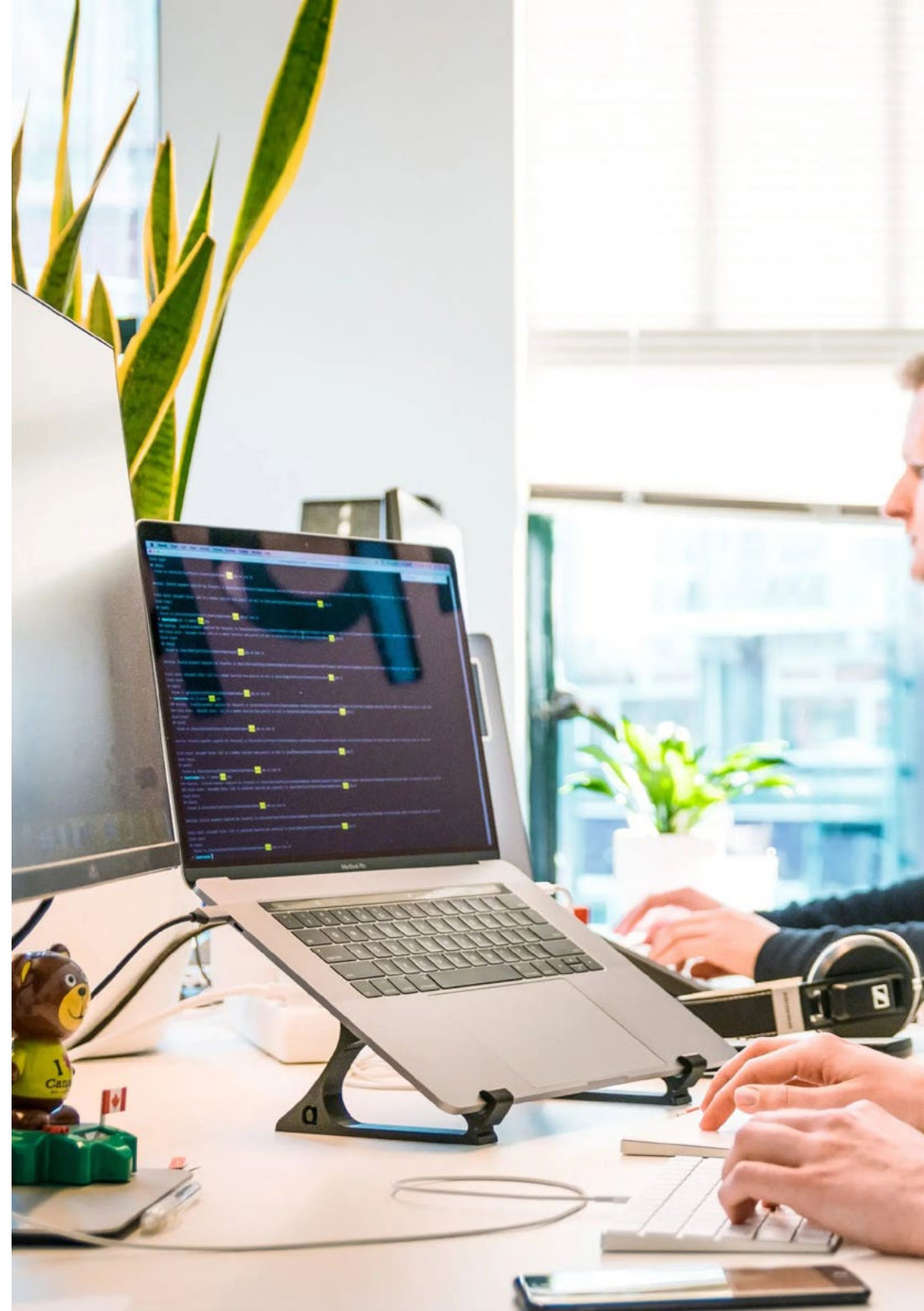


“

*The most complete and modern syllabus on the market, developed by industry professionals”*

## Module 1. Front-End Programming

- 1.1. HTML Language
  - 1.1.2. HTML Document
  - 1.1.3. *Head* Element
  - 1.1.4. *Body* Element
  - 1.1.5. Text
  - 1.1.6. Hyperlinks
  - 1.1.7. Images
  - 1.1.8. First Site
- 1.2. HTML Language. *Layouts*
  - 1.2.1. HTML Language. Components
  - 1.2.2. Traditional *Layout*
  - 1.2.3. Semantic *Layout*
- 1.3. Cascading Style Sheets CSS (*Cascading Style Sheets*)
  - 1.3.1. Inclusion of CSS in an HTML Document
  - 1.3.2. Comments
  - 1.3.3. Selectors
  - 1.3.4. Advanced Selectors
- 1.4. CSS (*Cascading Style Sheets*) Properties
  - 1.4.1. Color
  - 1.4.2. Text
  - 1.4.3. Pseudo Classes
  - 1.4.4. Transitions
  - 1.4.5. Animations
  - 1.4.6. Animation of Elements
  - 1.4.7. Advanced Animation
- 1.5. Box Models
  - 1.5.1. Height and Width
  - 1.5.2. Margin
  - 1.5.3. Filling
- 1.6. Positioning
  - 1.6.1. Static Positioning
  - 1.6.2. Relative Positioning
  - 1.6.3. Absolute Positioning
  - 1.6.4. Fixed Positioning
  - 1.6.5. *Floats*







- 1.7. Adaptive Design
  - 1.7.1. *Viewport*
  - 1.7.2. *Media queries*
  - 1.7.3. *CSS Units*
  - 1.7.4. *Images*
  - 1.7.5. *Frameworks*
- 1.8. *Modern Layout*
  - 1.8.1. *Flex*
  - 1.8.2. *Grid*
  - 1.8.3. *Flex Vs Grid*
- 1.9. *Pre-Processing*
  - 1.9.1. *Sass*
  - 1.9.2. *Variables*
  - 1.9.3. *Mixins*
  - 1.9.4. *Loops*
  - 1.9.5. *Functions*
- 1.10. *System Design*
  - 1.10.1. *Bootstrap*
  - 1.10.2. *Bootstrap Grid*
  - 1.10.3. *Header and Footer of Our Site*
  - 1.10.4. *Forms*
  - 1.10.5. *Cards*
  - 1.10.6. *Modals*



*Contents focused on updating  
your knowledge so that you  
stand out in the labor market"*

# 05 Methodology

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

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





“

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

## Case Study to contextualize all content

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

“

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



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



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

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

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

The case method 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

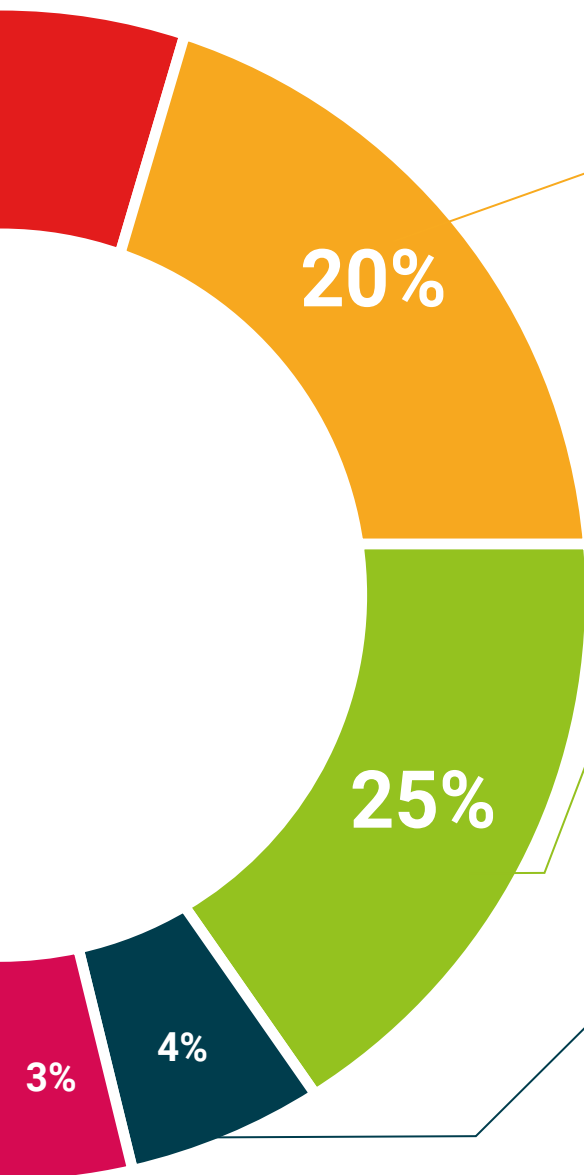
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### 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 Front-End Programming guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in Front-End Programming** 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 Front-End Programming**

Official N° of Hours: **150 h.**





## Postgraduate Certificate Front-End Programming

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- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

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