

# Postgraduate Certificate Full-Stack Developer



## Postgraduate Certificate Full-Stack Developer

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

Website: [www.techtitute.com/in/information-technology/postgraduate-certificate/full-stack-developer](http://www.techtitute.com/in/information-technology/postgraduate-certificate/full-stack-developer)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

Over the past few years, there has been a steady increase in the demand for IT specialists and, in particular, programmers. This program addresses *Full-Stack Developer* development in all its facets, from the design and interaction of web pages, to programming and web data management, teaching the student to develop their own websites, applications and digital products from scratch. Through a methodology based on *Relearning*, the students will be trained in the subject as if they were already working on it.





“

*Develops specialized knowledge about programming: logical structures, design principles and algorithm analysis"*



In times when companies are delving into their digital transformation strategies to adapt to the new market dynamics, professionals with technological skills are in great demand. In this context, the Full-Stack Developer is one of the most required profiles.

A *Full Stack* expert is the person responsible for the creation and maintenance of an application or website. For this reason, it is important that the professional has knowledge of *Front-End* and *Back-End* development. They will be in charge of developing the structure of the website, designing the user interface, optimizing the websites with good maintenance and ensuring the speed at which they are accessed, as well as creating databases with a good performance.

With this program, the graduate will learn to create a website by immersing themselves in the best practices of design and working with different languages. Obtaining a solid base of *Front end*, *Back end*, database, design and implementation of algorithms and code versioning hosting service.

It is, therefore, a 100% online Postgraduate Certificate that provides the students with the ease of being able to take it comfortably, wherever and whenever they want. In just 6 weeks you will acquire the necessary keys to ensure that your application is properly maintained thanks to the latest tools presented in this program.

This **Postgraduate Certificate in Full-Stack Developer** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ Case studies presented by experts in Full Stack 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



*Analyze the interaction between Internet servers and clients to offer services to your users"*



*Delve into agile methodologies, an approach that allows you to reach higher levels of effectiveness in the planning, execution and development of projects"*

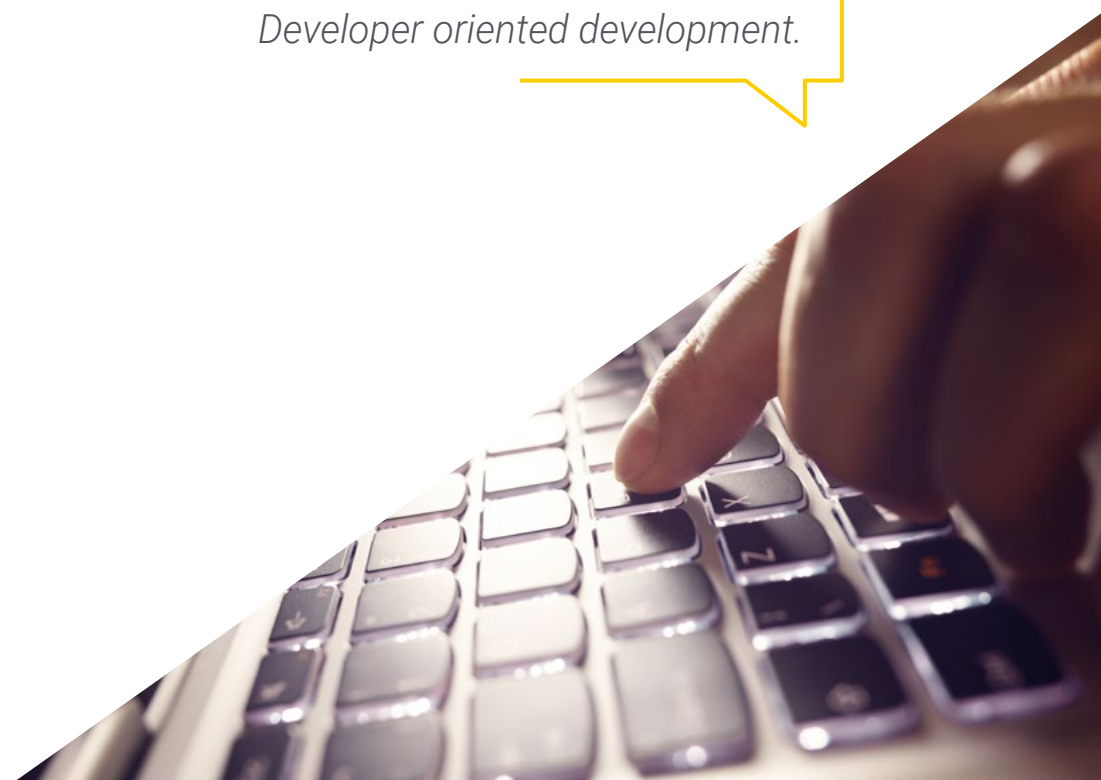
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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.

*Addresses the key tools for software development: Git, GitHub and command terminal.*

*Learn how to manage the environment and tools for Full-Stack Developer oriented development.*



# 02

# Objectives

Developing advanced programming knowledge, fostering the use of version control systems and code hosting platforms, promoting the use of agile methodologies, as well as increasing command line skills, are some of the objectives of this Postgraduate Certificate, which aims to foster algorithmic thinking and provide the graduate with the necessary tools and skills for development.





“

*TECH will provide you with the necessary tools and skills for the development of your applications and web pages”*



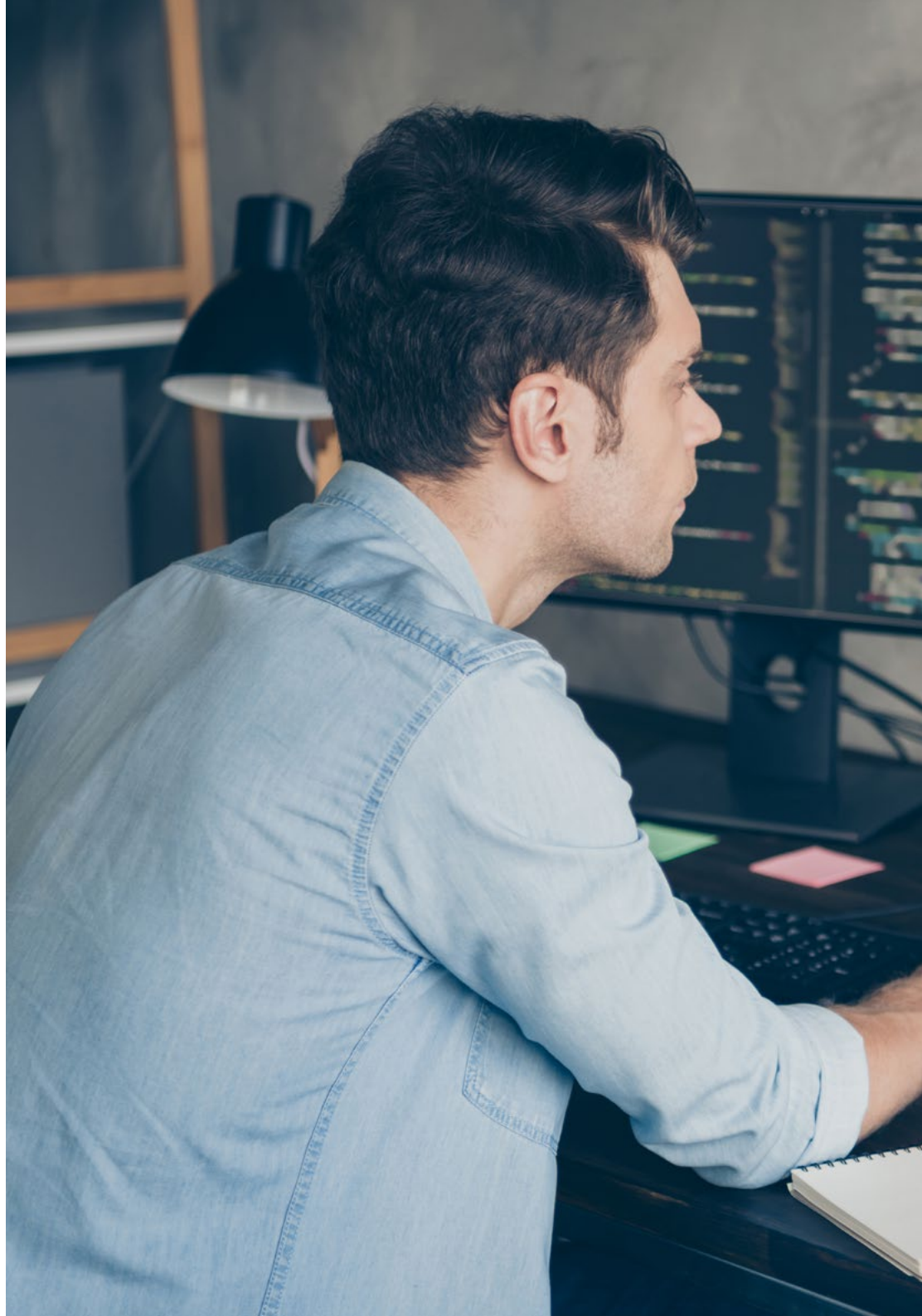
## General Objectives

---

- ◆ Generate specialized knowledge on key aspects of programming
- ◆ Encourage algorithmic thinking
- ◆ Provide the necessary tools and skills for development
- ◆ Promote the adoption of Agile Methodologies for project execution

“

*You will get to increase your command line skills and develop advanced programming language knowledge”*





## Specific Objectives

---

- ◆ Develop advanced programming knowledge
- ◆ Promote the use of version control systems and code hosting platforms
- ◆ Promote the use of Agile Methodologies
- ◆ Delve into the key concepts and operation of the internet
- ◆ Increase command line skills



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 the skills in *Full-Stack Developer*.





“

*Acquire the knowledge and skills you need to develop specialized programming knowledge”*



## Management



### Mr. Olalla Bonal, Martín

- ◆ Client Technical Specialist Blockchain in 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, Majsja and Hippo Viajes
- ◆ Electronics Technician in IPPF 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 the *Full-Stack Developer* specification, therefore establishing a curriculum whose module offers a broad perspective of programming and languages, from the data structure in development to the design and interpretation of algorithms, including the command line, among others.





“

*A syllabus developed by industry professionals  
and with the most up-to-date content on the  
market to make your learning successful"*

## Module 1. Full-Stack Developer

- 1.1. Full-Stack Developer I. Programming and Languages
  - 1.1.1. Programming
  - 1.1.2. Programming Roles
  - 1.1.3. Languages and *Frameworks*
  - 1.1.4. Algorhythm
  - 1.1.5. Characteristics of an Algorithm
- 1.2. Full-Stack Developer II. Typology
  - 1.2.1. Variables and Constants
  - 1.2.2. Types
  - 1.2.3. Operators
  - 1.2.4. Declarations
  - 1.2.5. Loops
  - 1.2.6. Functions and Objects
- 1.3. Data Structure in Development
  - 1.3.1. Linear Structure Types
  - 1.3.2. Functional Structure Types
  - 1.3.3. Tree Structure Types
- 1.4. Algorithm Design and Interpretation
  - 1.4.1. Parallelism in Development. Divide and Conquer
  - 1.4.2. Voracious Algorithms
  - 1.4.3. Dynamic Programming
- 1.5. Environment and Tools for Full-Stack Developer Oriented Development
  - 1.5.1. Preparation of the Environment for Mac OS
  - 1.5.2. Preparation of the Environment for Linux
  - 1.5.3. Preparation of the Environment for Windows
- 1.6. Command Line. Typology and Operation
  - 1.6.1. The Terminal
  - 1.6.2. Emulators
  - 1.6.3. Command Interpreter
  - 1.6.4. First Commands
  - 1.6.5. Navigation
  - 1.6.6. Managing Files and Folders Using the Command Line Interface
  - 1.6.7. *Secure Shell*. SSH
  - 1.6.8. Advanced Commands
- 1.7. Git. Software Repository
  - 1.7.1. Git Software Repository
  - 1.7.2. Using Git
  - 1.7.3. Software Repository
  - 1.7.4. Branches
  - 1.7.5. Duty Cycle
  - 1.7.6. Commands
- 1.8. Code Versioning Hosting Service
  - 1.8.1. Code Versioning Hosting Service
  - 1.8.2. Suppliers
  - 1.8.3. Repositories
- 1.9. Internet
  - 1.9.1. Internet
  - 1.9.2. Protocols Used in WWW
  - 1.9.3. HTTP Protocol
- 1.10. Methodologies in Full Stack Development
  - 1.10.1. Scrum
  - 1.10.2. XP
  - 1.10.3. *Design sprint*





# 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 Full-Stack Developer 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 Full-Stack Developer** 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 Full-Stack Developer.**

Official N° of Hours: **150 h.**



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



## Postgraduate Certificate Full-Stack Developer

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



# Postgraduate Certificate Full-Stack Developer

