Postgraduate Certificate
Front-end Development in Web Applications

tech *technological university*

Postgraduate Certificate
Front-end Development in Web Applications

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

Website: **www.techtitute.com/pk/information-technology/postgraduate-certificate/front-end-development-web-applications**

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01
Introduction

Web applications are increasingly demanded by companies in all types of sectors, requiring constant innovations, the creation of more attractive user interfaces and with greater performance and accessibility. This unstoppable reality has motivated TECH to create this 100% online degree that offers the student an advanced and intensive learning on hybrid development tools. To this end, the graduate will have a syllabus available at any time of the day, prepared by experts in software, systems and web development and with extensive professional experience in the sector.

This 100% online Postgraduate Certificate will help you with the development of Front-end Web Applications"

The constant development of the digital world and communication through smart mobile devices has led many companies to bet on the creation of web applications, which motivate the purchase action, inform or serve as entertainment. In this scenario, IT professionals specialized in Front-end have become even more relevant, given their skills to achieve an attractive and secure interface.

Given this reality, there is not only a wide demand for creation, but also for profiles with advanced knowledge of the techniques and tools to be used to develop them efficiently. For this reason, TECH has created this 6-week university degree, which will take the graduate to deepen the technology and development patterns used to create modern web experiences.

Thus, through innovative teaching materials, the graduate will delve into the design of the user interface, client-server communication, user experience (UX) and accessibility. This degree also compiles performance optimization techniques to achieve a smooth and fast experience, ensuring that applications run in different environments. All this, in addition, with a dynamic learning and Relearning system, which favors the assimilation of concepts in a simple way.

TECH also offers a comfortable teaching methodology and the possibility of organizing the time to suit the student. This 100% online Postgraduate Certificate will allow students to obtain a theoretical-practical syllabus, anywhere in the world and with just one device.

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

- The development of practical cases presented by experts in Computer, Software, Systems
- The graphic, schematic and practical contents of the book provide theoretical and practical information on those 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 to the expert, debate forums on controversial topics, and individual reflection assignments
- Availability to access content from any fixed or portable device with internet connection

Stand out in the technology sector thanks to this 100% online degree, which adapts to your needs"

"Acquire an apprenticeship in Front-end Web Application Development technologies with the most advanced content in the academic panorama"

Deepen your knowledge in synchronous communication and asynchronous communication, with the best multimedia didactic materials.

Studying at TECH you will achieve your goals and along the way you will be accompanied by the best professionals in Software and Computing.

The program includes in its teaching staff professionals from the sector who bring to this program the experience of their work, as well as recognized 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 immersive education programmed to learn in real situations.

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

02
Objectives

This Postgraduate Certificate aims to provide knowledge and skills to those who wish to enter the world of creating attractive web interfaces. In this sense, it is characterized by a practical and project methodology, which allows students to immediately apply what they have learned and develop an impressive portfolio. In addition, it offers a comprehensive overview of the essential skills needed to excel in the field of Front-End development.

TECH will give you the boost to your career as a Web Applications developer and through an advanced an advanced university degree"

General Objectives

- Develop the necessary steps for the creation of the Front-end of the web application, taking into account programming aspects as well as accessibility requirements, multi-language and multi-platform support

- Create personalized experiences, monitor and monetize the use of the website

- Consolidate application design and development best practices with a project management that favors continuous iteration, integration and deployment

- Review the main features and vendors, planning migration scenarios and incorporating new roles and processes in project management

- Analyze in depth the aspects related to the security of web applications, with special applications, with a special focus on the most common attacks and the prevention, detection and mitigation prevention, detection and mitigation mechanisms

Specific Objectives

- Examine Front-end development technologies and patterns
- Establish how client-server communication works
- Determine the options for managing the state of a web application
- Analyze the user interface development process
- Design advanced user experiences with multi-platform support
- Apply accessibility criteria and multi-language support
- Identify and solve Front-end performance issues

Front-end development is the key to creating attractive and functional user interfaces in web applications. Develop them with this degree"

03

Course Management

The TECH team has carefully designed this academic Postgraduate Certificate with the purpose of providing students and professionals with the necessary skills and knowledge to excel in the exciting world of Web Application development. For this reason, this Postgraduate Certificate has been designed and developed by a group of experts who have proven their excellence in creating engaging and functional user experiences on the web.

Improve through image optimization techniques the performance of Web Applications that are truly attractive to users"

Management

Dr. Pantaleón García del Valle, Eduardo

- Solutions Architect at Amazon Web Services (AWS)
- Solutions Architect at Liferay, Inc
- Technical Manager at Jungheinrich AG
- Senior Software Engineer and Team Manager at Liferay
- Project Manager at Protecmedia
- Organization and delivery of online technical webinars within the AWS Customer Proficiency Plan program
- Member of the Alumni Mentoring program at Carlos III University of Madrid, for career advice to students and recent graduates
- Graduated in Telecommunication Engineering from Carlos III University of Madrid
- PhD in Software, Systems and Computing from the Polytechnic University of Madrid
- Master's Degree in Computer Languages and Systems from the National University of Distance Education (UNED)
- Executive Data Science Specialization from Johns Hopkins University

Professors

Mr. Orbezo Gutiérrez, Alberto
- ◆ Senior Software Developer at Babel
- ◆ Programmer and analyst at Álamo Consulting
- ◆ IT Consultant

A unique, key, and decisive educational experience to boost your professional development"

04
Structure and Content

This Postgraduate Certificate details its objectives and the value it offers to those seeking to excel in the creation of impressive and highly effective user interfaces for Web Applications. For this purpose, the team of highly specialized teachers in the area has developed a complete study plan oriented to facilitate the most advanced learning in this field. In this way, the graduate will gain solid skills that will make them grow professionally in the technology industry.

This academic proposal will allow you to approach client-server communication from a theoretical and practical perspective"

Module 1. Front-end Development in Web Applications

1.1.   Front-end Web Application Development Technologies

    1.1.1.   HTML5

    1.1.2.   CSS

    1.1.3.   DOM and JavaScript

1.2.   Front-end Development Patterns

    1.2.1.   Multiple Page Applications

    1.2.2.   Single Page Applications

    1.2.3.   Progressive Web Applications

1.3.   Development of User Interfaces (UI) in Web Applications

    1.3.1.   Frameworks and Front-end development tools

    1.3.2.   Separation of responsibilities

    1.3.3.   Component-oriented architectures

1.4.   Client-Server Communication

    1.4.1.   Request flow

    1.4.2.   Synchronous communication

    1.4.3.   Asynchronous communication

1.5.   Status Control in Web Applications

    1.5.1.   Global and shared state in Web Applications

    1.5.2.   State Management Patterns (Redux, MobX, Recoil)

    1.5.3.   Use cases and recommendations

1.6.   User Experience (UX) in Web Applications

    1.6.1.   User-Centered Design

    1.6.2.   Information Architecture

    1.6.3.   Design and prototyping tools

1.7.   Web Accessibility

    1.7.1.   Web accessibility standards and regulations (ADA, WCAG, European Accessibility Act)

    1.7.2.   Accessible Rich Internet Applications (ARIA)

    1.7.3.   Web accessibility tools
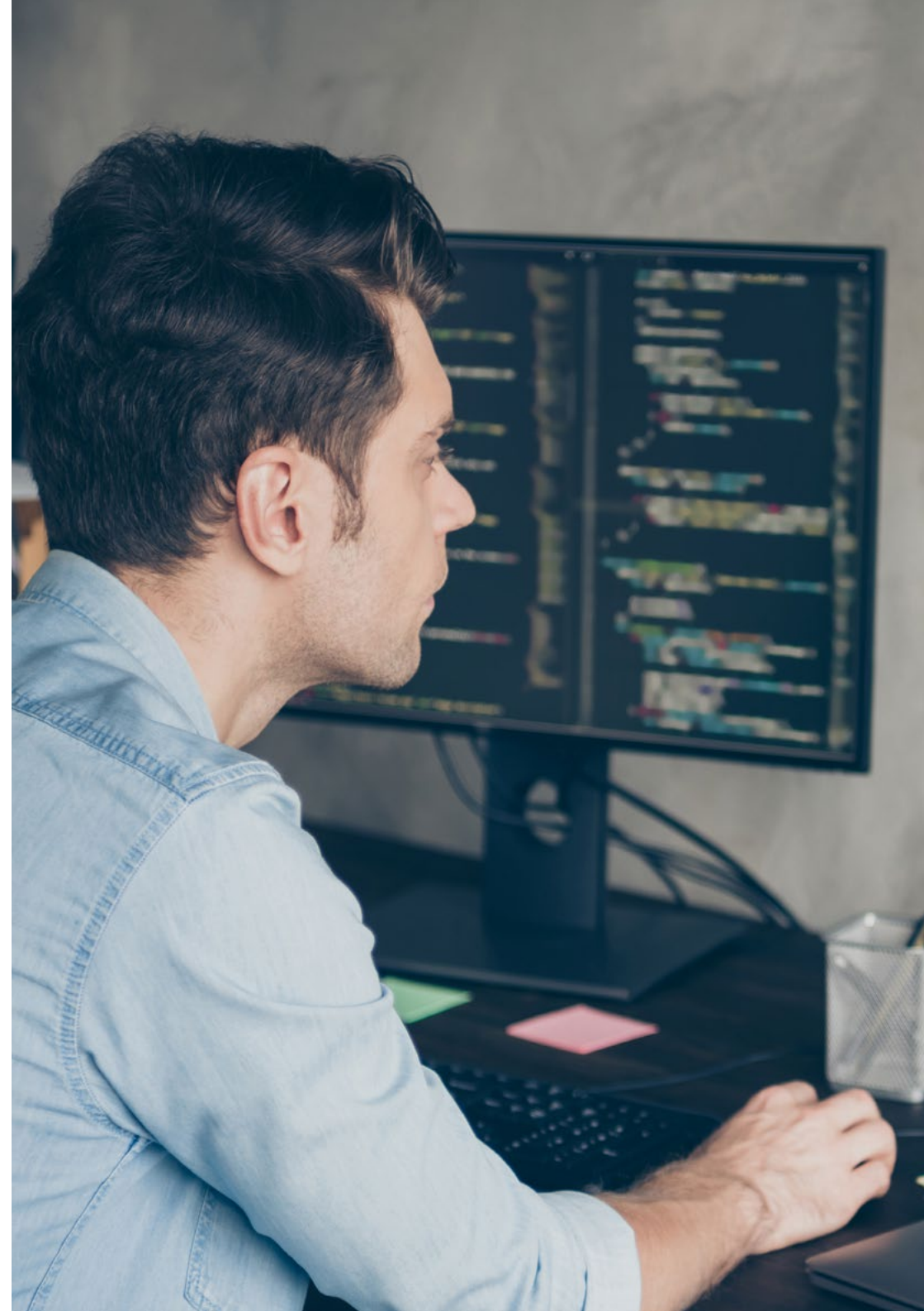
An academic Postgraduate Certificate designed by IT professionals who will provide you with the knowledge you need to grow in the technology industry"

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 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.

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

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

30%

10%

8%
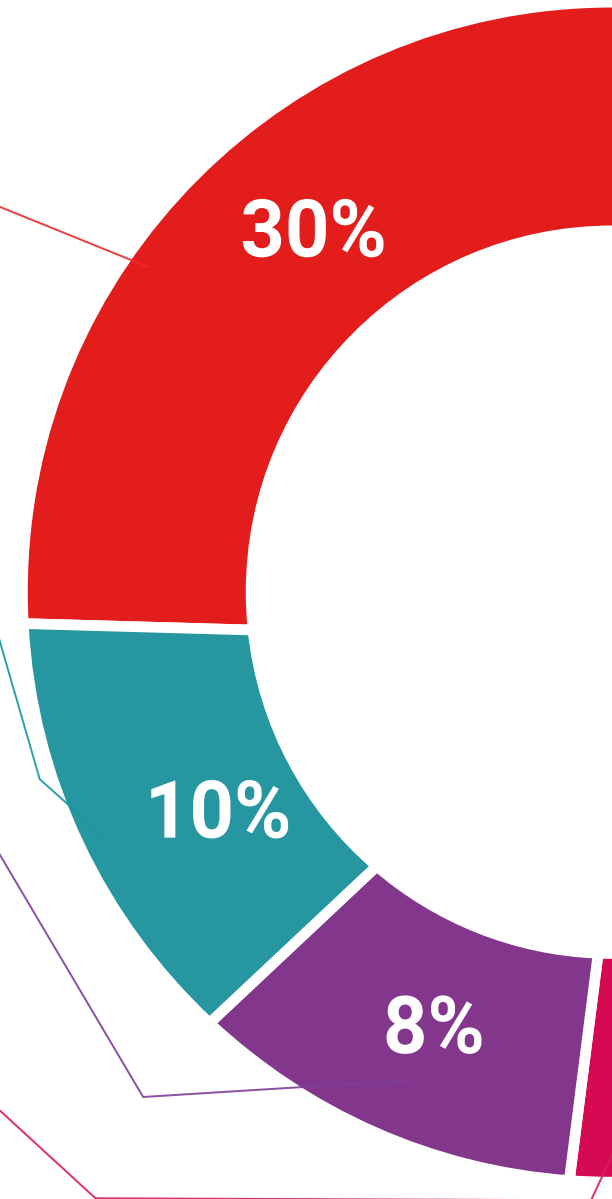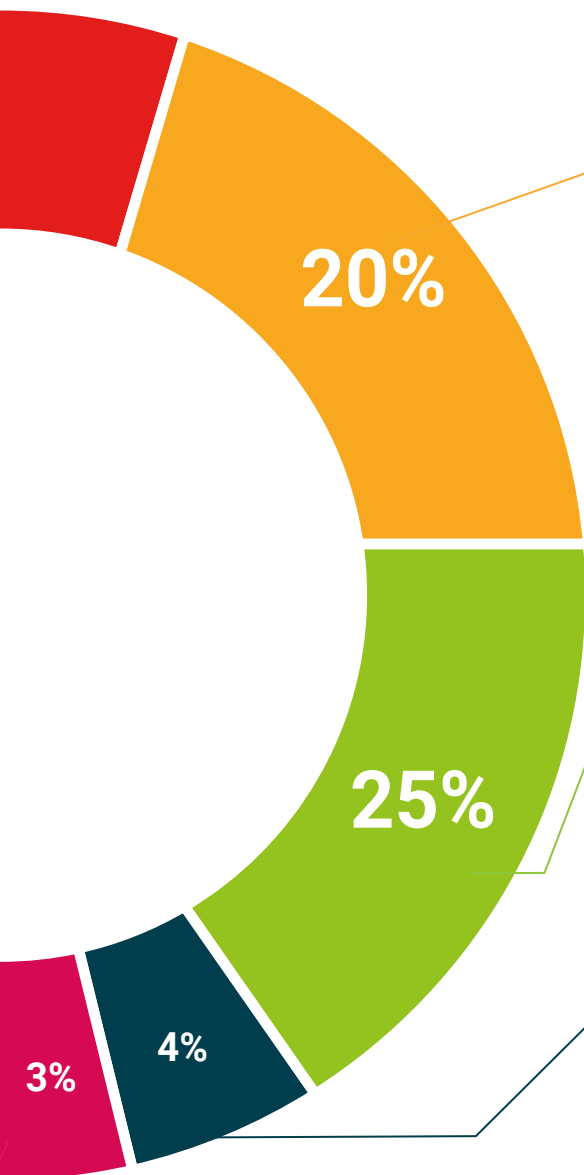
Case Studies

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.

20%

25%

4%

3%

06
Certificate

The Postgraduate Certificate in Front-end Development in Web Applications 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 Front-end Development in Web Applications** 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 Development in Web Applications**

Official Nº of Hours: **150 h.**

tech technological university

Awards the followi ng

CERTIFICATE

to

Mr./Ms. _____, with identification number _____ .
For having passed and accredited the following progra   m

POSTGRADUATE CERTIFICATE

in

Front-end Development in Web Applications

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy .

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018 .

June 17, 2020

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Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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.

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