Postgraduate Diploma
Website Engineering

tech global university

Postgraduate Diploma
Website Engineering

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **24 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-website-engineering**

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01
Introduction

This Postgraduate Diploma offers students the opportunity to specialize in website programming and design, exploring those elements that contribute to excellent coding for engineers. Millions of websites are created every week and professionals are needed who are well prepared to meet the demands of customers and users. This program has been presented specifically so that professionals can take advantage of the large existing market in web programming and design, and be in the best possible position to meet the challenges of today's digital and online environment.

Thousands of companies are waiting for qualified professionals to create their web pages; learn with TECH and achieve your goals"

Websites are the main form of interaction on the Internet, being the first communication channel used by different companies, media and various professionals seeking to share an individual space with other users. For this reason, they are one of the biggest sources of employment today, as there is a constant need for people who are qualified in website programming and design.

This Postgraduate Diploma in Website Engineering enables students to acquire the necessary skills to become valued professionals in this popular field. Thus, its main objective is to make students aware of the wide range of possibilities offered by the different programming languages for any web page, so that they can choose the best solutions for each case.

This program applies advanced teaching methods, always using an eminently practical approach, to teach a full range of engineering tools, making its content very thorough, specialized and high-level, distinguished by its high quality and attention to detail.

Likewise, the syllabus has been designed by leading experts in IT and engineering, with ample experience in programming and web design, who are prepared to share their knowledge, so as to guarantee student success. In this way, TECH students will be able to immediately apply the skills acquired, since they are taught by dedicated professionals that are well versed in the field of computer programming.

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

- Innovative content, developed to keep up to date with the latest developments in web programming
- A teaching methodology designed to get the most out of the content
- A combination of theory and practice, where students will be able to apply the concepts learned that will later serve them in their professional careers
- An overarching view of engineering, programming and web development that will enable students to understand the current situation
- Practical activities and close support from TECH teachers, always attentive to students' queries
- Content that is accessible from any fixed or portable device with an Internet connection

Learn how to improve your coding, become an expert programmer and open up new career paths thanks to your new skills"

Clients need skilled web development professionals: this program will make you stand out from the crowd"

Update your knowledge in web development and be able to provide the best solutions for your clients.

Learn to expertly program web pages with this Postgraduate Diploma.

The teaching staff includes professionals from the sector who contribute their professional 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 designed to prepare them for 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 student will be assisted by an innovative interactive video system created by renowned and experienced experts.
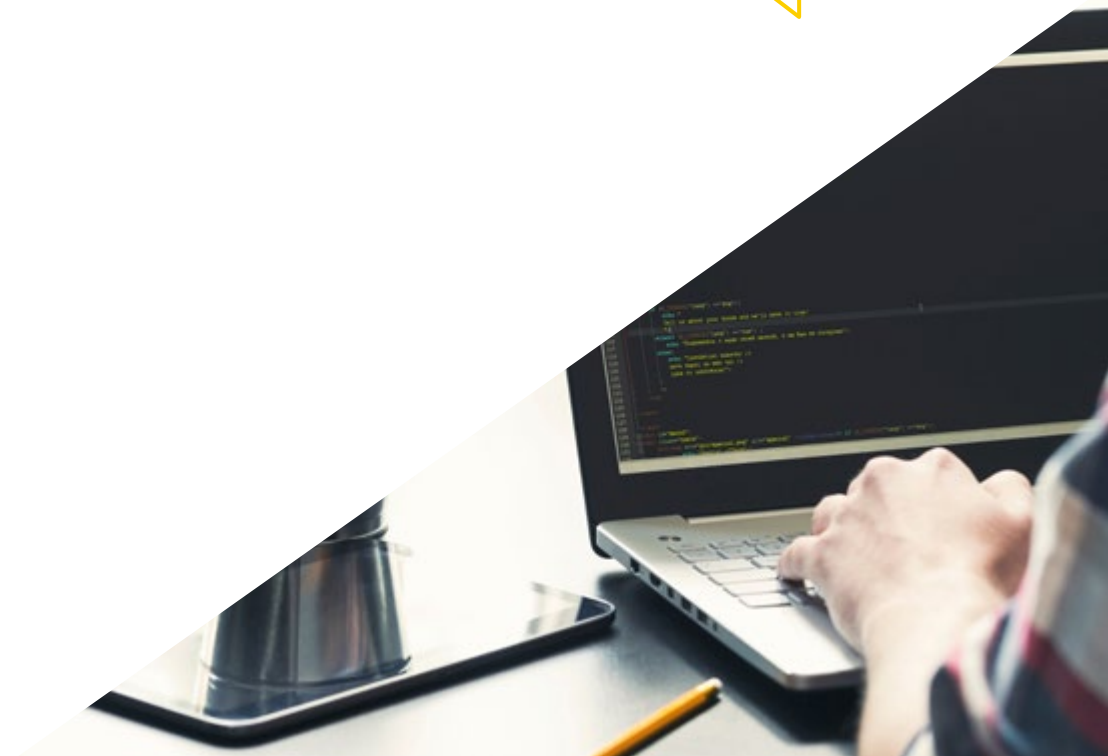
02
Objectives

The main objective of this Postgraduate Diploma is to turn students into expert web developers. To this end, it employs a series of tools that make students the best positioned professionals in the labor market, capable of attracting the attention of new clients. Thus, thanks to TECH's teaching methodology, its innovative contents and its expert faculty in website engineering, students will become true experts and respected professionals by the end of this program.

TECH wants you to achieve your goals, that's why this Postgraduate Diploma is your best opportunity to advance in your career as a web programmer"

General Objectives

- Obtain an overarching view of the current state of web development
- Discover the best tools for web programming
- Discover the best web design solutions, taking into account customer preferences
- Explore and learn new web programming languages
- Become proficient in writing code in standard web programming languages
- Obtain agile programming tools
- Learn to pay special attention to the importance of the web interface
- Become an outstanding professional in the field of web programming
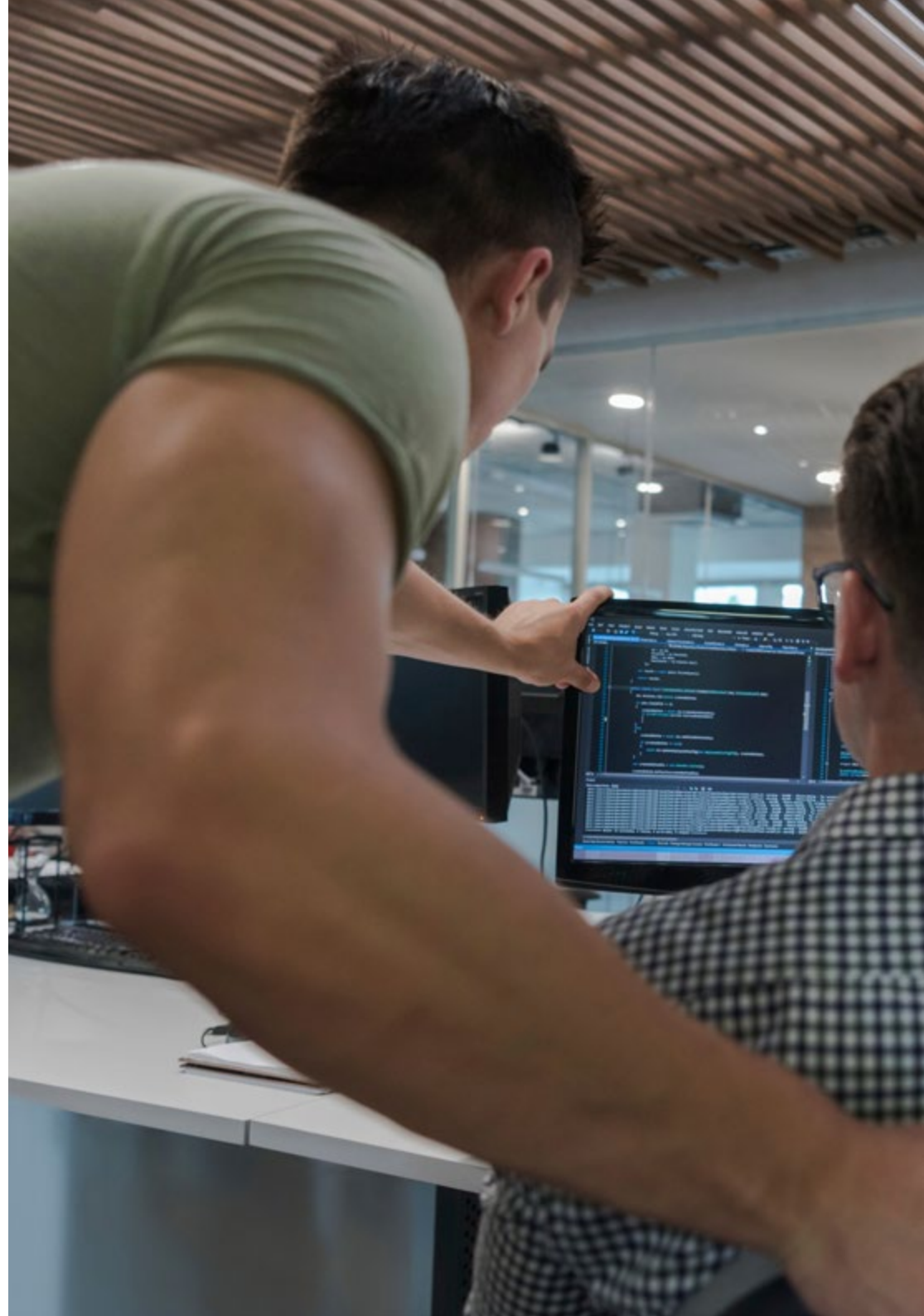
Specific Objectives

Module 1. Web Programming Languages

- Integrate applications developed in PHP with MySQL databases
- Master customer interaction using forms, *cookies* and sessions
- Gain expertise in web application and web page development, both on the client and server side
- Examine web programming languages and their implementation in development environments
- Analyze the different frameworks and libraries for the main web programming languages
- Determine the different optimization techniques to be considered during the development of any web project

Module 2. Website Engineering and Architecture

- Assess the origin of web architecture and its role in website development
- Examine the three pillars of web architecture to recognize the importance of each when designing and building web projects
- Develop the different types of web architecture, their advantages and suitability
- Evaluate the stages that make up web architecture, the correlation between them and their development
- Optimize the relationship between web architecture and user experience and the relationship between web architecture and SEO
- Analyze browsing and content organization prior to the modeling phase

Module 3. User Interface Design and Programming

- Identify 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

Module 4. Methodologies for Web Application Development

- Determine key elements in business cases, product vision and user stories
- Plan iterations based on team speed and iteration length
- Gather and prioritize requirements for agile projects
- Recognize guidelines for breaking down, estimating, and assigning user stories
- Develop agile practices to manage project quality and risk
- Calculate cost and schedule performance indicators for agile projects
- Analyze the keys to contracting for agile projects
- Use tools and strategies to actively engage stakeholders throughout the life of a project
- Examine the leadership strategies of high-performing self-managed teams

TECH knows that you want to be a sought-after professional, achieve your goal with this Postgraduate Diploma"

03
Course Management

The best teaching staff is waiting to teach students, with the best and most up-to-date knowledge, and using a methodology that matches the expectations of professionals seeking specialization. Thus, students know that they are in the best possible hands, with the most effective learning process.

The best experts teach you the best content.
Make up your mind and learn with TECH"

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
- Specialist in Web Services and Applications Development from the University of Alicante
- 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" - Bulletin of the Technical Committee on Learning Technology
- "Grama: a web application for learning and generating creative language" - INTED Proceedings
- Research in Human Language Technologies (TLH) - GPLSI (University of Alicante)

Mr. Vicente Miralles, David
- (CSO) Head of Expansion Strategies at 'ICU Medical Technologies'
- (CEO) Executive Director / Co-Founder at 'CE Informática'
- Professor / Trainer in private entities
- Postgraduate Certificate in Technical Computer Engineering from Miguel Hernández University of Elche
- Development Engineer at 'Computer Elche' (COO)
- (COO) Operations Manager at 'VinoTrade'

Mr. Del Moral García, Francisco José

- Security Analyst at Page Group
- Degree in Telecommunication Technologies Engineering, University of Granada Specialism: Telecommunication Systems
- Master's Degree in IT Security, International University of La Rioja
- Roca Sanitario (Cyber Security Analyst)
- Allianz Technology (Information Security Analyst)
- Clover Technologies (IT Security Airbus Defense and Space)
- EVERIS (Solutions Assistant)

Mr. Boix Tremiño, Jorge

- Founder of HostingTG, professional web hosting services company
- Founder of GrupoTG, a digital marketing and web design services company
- Co-Founder of TiendaWebOnline, a Digital Dropshipping business creation company
- Nortempo, trainer in the field of programming and marketing strategies
- Intergon2000, Graphic designer
- Ibertex, Graphic designer
- Xion Animation, information technology project manager
- Kingest, Sales and marketing director
- Computer Engineer at UNED.
- Award for Business Excellence from the Institute for Professional Excellence Institute for Professional Excellence in 2019
- European Medal of Merit in the Workplace for Professional Career Achievement from the European Association for Economics and Competitiveness
- Gold Star for Professional Excellence from the Institute for Professional Excellence in 2016

Mr. Alfaro, José

- *Team Leader* at DisneyLand Paris
- Journalism Graduate
- Course in *Project Management Methodologies*

Mr. Herrero García, Diego

- Computer Applications Analyst, Manager and Developer
- Industrial Technical Engineer, University of La Rioja
- Industrial Engineer, University of La Rioja
- Postgraduate Diploma in Innovation Management, University of La Rioja

Take this opportunity to learn about the latest advances in this area in order to apply them to your daily practice"

04
Structure and Content

The syllabus has been designed to offer educational efficiency, carefully selecting the contents to offer a complete course which includes all the fields of study essential to achieving real knowledge of the subject; with the latest updates and developments in the sector. Therefore, a program has been established with modules that offer a broad overview of Website Engineering. 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 high-quality Postgraduate Diploma that will allow the student to advance quickly and steadily in the acquisition of knowledge, with the scientific rigor of a world class education"

Module 1. Web Programming Languages

1.1.   Web Programming
    1.1.1.   The Web
    1.1.2.   Web Design
    1.1.3.   Web Development
        1.1.3.1. *Front-End*
        1.1.3.2. *Back-End*
        1.1.3.3. *Full-Stack*
    1.1.4.   Types of Languages
        1.1.4.1. Programming Languages
        1.1.4.2. Markup Languages
        1.1.4.3. *Scripting* Languages
    1.1.5.   Framework vs. Libraries
    1.1.6.   Development Environments (IDE - Integrated Development Environment)
    1.1.7.   Navigation Systems
1.2.   HTML
    1.2.1.   HTML
    1.2.2.   Labels
        1.2.2.1. Nesting
        1.2.2.2. Attributes
    1.2.3.   Documents Structure
        1.2.3.1. Headings
        1.2.3.2. Body
    1.2.4.   Semantic Components
        1.2.4.1. Root Elements
        1.2.4.2. Metadata
        1.2.4.3. *Scripting*
        1.2.4.4. Sections
        1.2.4.5. Comments

    1.2.5.   Text Content
        1.2.5.1. Headings
        1.2.5.2. Paragraphs
        1.2.5.3. Lists
        1.2.5.4. Text Formats
        1.2.5.5. Special Characters
    1.2.6.   Blocks
    1.2.7.   Hyperlinks
    1.2.8.   Embedded Content
    1.2.9.   Tables
    1.2.10.   Forms
1.3.   CSS
    1.3.1.   CSS
    1.3.2.   Style Applications
    1.3.3.   Rules
        1.3.3.1. Selectors
        1.3.3.2. Properties and Values
        1.3.3.3. Comments
    1.3.4.   Style Collisions
        1.3.4.1. Heritage
        1.3.4.2. Cascade
    1.3.5.   Selectors
    1.3.6.   Combiners
    1.3.7.   Pseudo Classes
    1.3.8.   Pseudo Components
    1.3.9.   Box Models
    1.3.10.   Attributes
    1.3.11.   Measuring Units
        1.3.11.1. Absolute Units
        1.3.11.2. Relative Units
    1.3.12.   Positioning
    1.3.13.   Colors
    1.3.14.   Variables
    1.3.15.   Animations

Module 2. Website Engineering and Architecture

Module 3. User Interface Design and Programming

Module 4. Web Application Development Methodologies

4.1. Agile Project Management: Foundation for Web Application Development
    4.1.1. The Agile Approach
    4.1.2. Agile Values and Principles
    4.1.3. Traditional Project Management and Agile
    4.1.4. Agile Project Management Models
    4.1.5. Agile Methodologies

4.2. Using an Agile Approach for Web Application Development
    4.2.1. Myths and Realities Regarding Agility
    4.2.2. Agile Practices
    4.2.3. Selecting Agile Practices for a Project
    4.2.4. Developing an Agile Mentality
    4.2.5. Implementing and Communicating Adopting Agile Principles

4.3. Agile Methodologies for Web Application Development
    4.3.1. *Lean Development*
    4.3.2. *Extreme Programming* (XP)
    4.3.3. *Crystal Methods*
    4.3.4. *Feature Driven Development* (FDD)
    4.3.5. Dynamic Systems Development Method (DSDM) and Unified Agile Processes

4.4. Agile Methodologies for Advanced Web Application Development
    4.4.1. Kanban Method
    4.4.2. Scrum and Scrumban
    4.4.3. DA Disciplined Agile
    4.4.4. Hybrid Methodologies
    4.4.5. Comparing Agile Methodologies

4.5. Web Development Projects: Planning Process
    4.5.1. Starting an Agile Project
    4.5.2. Agile Planning Process
    4.5.3. Gathering Requirements and User Story
    4.5.4. Establishing Project Scope Using Agile Methods: *Product Backlog*
    4.5.5. Agile Tools to Prioritize Requirements

4.6. Stakeholders in Agile Projects for Web Application Development
    4.6.1. Stakeholders in Agile Projects
    4.6.2. Fomenting Effective Participation among Stakeholders
    4.6.3. Participatory Decision Making
    4.6.4. Agile Knowledge Sharing and Gathering

4.7. Launch Plan and Estimate Creation
    4.7.1. Launch Plan
    4.7.2. Estimating User Story Size
    4.7.3. Estimating Speed
    4.7.4. Agile Estimation Techniques
    4.7.5. User Story Prioritization

4.8. Iterations Planning and Monitoring
    4.8.1. Iteration and Progressive Development
    4.8.2. Iteration Planning Process
    4.8.3. Creating Iteration Backlog
    4.8.4. *Buffers* and Agile Schedule
    4.8.5. Iteration Progress Monitoring
    4.8.6. Monitoring and *Release* Progress Report

4.9. Team Leadership in Web Application Development
    4.9.1. Agile Teams
    4.9.2. Agile Project Leader
    4.9.3. The Agile Team
    4.9.4. Virtual Agile Team Management
    4.9.5. Coaching for Team Performance Improvement

4.10. Value Management and Delivery in Web Development Projects
    4.10.1. Delivery Processes Focused on Value
    4.10.2. Product Quality
    4.10.3. Quality Agile Practices
    4.10.4. Risk Management
    4.10.5. Agile Contracts
    4.10.6. Value Gained Management in Agile Projects

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 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.

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 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.

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%

20%

25%

4%

3%
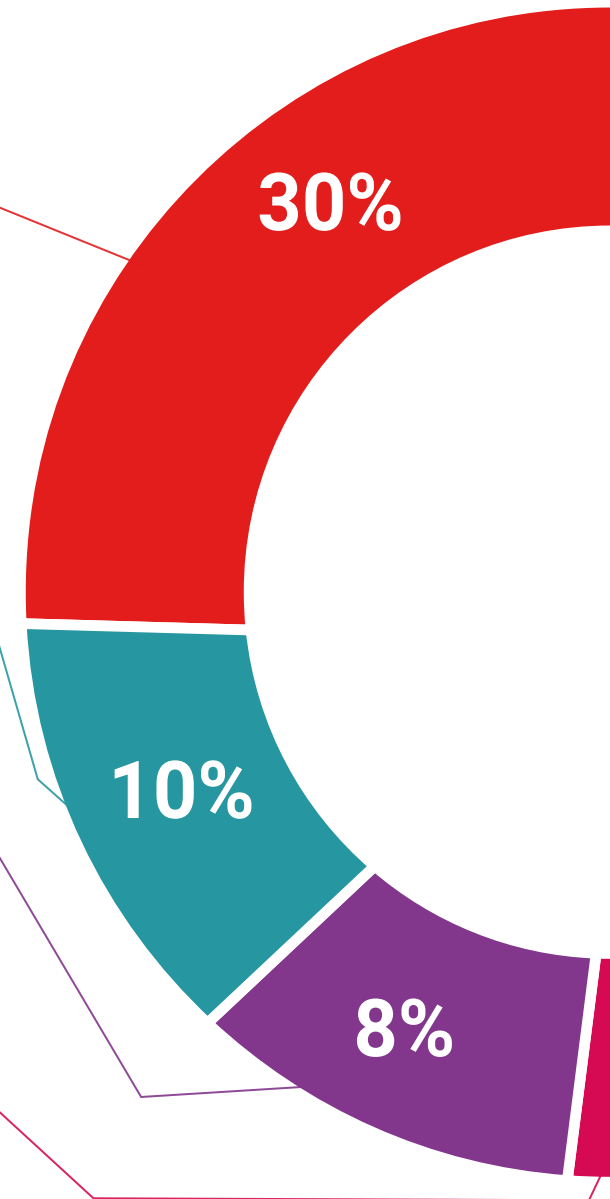
Case Studies

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

Successfully complete this program and receive your Postgraduate Diploma without having to travel or fill out laborious paperwork"

This program will allow you to obtain your **Postgraduate Diploma in Website Engineering** 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.
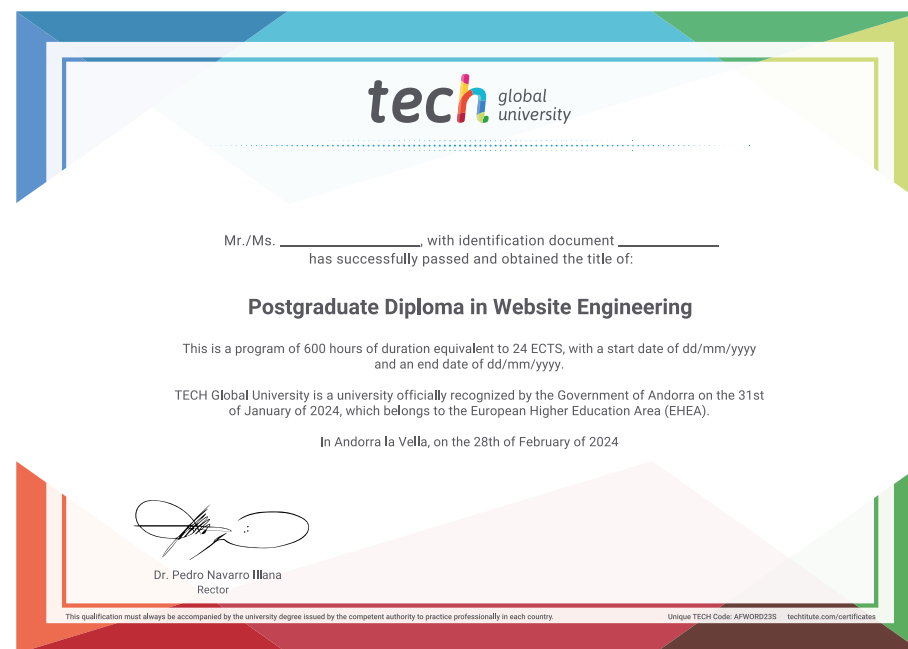
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Website Engineering**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**

tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Website Engineering

This is a program of 600 hours of duration equivalent to 24 ECTS, with a start date of dd/mm/yyyy
and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st
of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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