Postgraduate Certificate
Web Programming Languages

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Postgraduate Certificate
Web Programming Languages

- 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/web-programming-languages

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01

Introduction

Having a presence on the internet through a website that generates a positive image and marks a difference has become an essential and growing need in the world, especially for businesses. With this intensive program, the engineer will be able to use the main programming languages, their respective libraries and frameworks, as well as different techniques and complementary tools, to carry out any web project at a professional level.

This Postgraduate Certificate provides a valuable addition to the prior studies of any website engineer seeking high-quality, specialized education in Web Programming Languages"

Nowadays, most companies have their own internet space, where they offer corporate data, contact forms and, in some cases, sales options. In this way, the web allows them to reach a larger number of customers and improve their relationship with them.

This trend has led to a considerable growth in the demand for professionals in web design, development and programming (one of the most important and interesting sectors within the digital field). For this reason, having a good background in this field provides a better outlook for the future. This is a professional sector recommended for people with extensive web design and development management skills. Therefore, a web programmer must be able to competently handle the technical resources needed to tackle professional web-related projects (both the creation and improvement of functionality), of virtually any kind.

This program builds specialist knowledge on web page creation, from the programmer's point of view. In terms of the customer environment, it delves into design and layout (HTML and CSS), including the creation of dynamic pages (JavaScript). Professionals will also work on the server side, using PHP and a database manager (MySQL). Furthermore, different techniques, tools, frameworks and libraries will be used to facilitate many programming tasks, such as the creation of visual effects and the use of complex functions. Finally, various optimization techniques and good programming practices, especially useful during project development will be discussed.

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 Web Programming Languages** contains the most complete and up-to-date program on the market. The most important features include:

- The examination of case studies presented by experts in Web Programming Languages
- 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”

Specialize with the best and acquire the knowledge and skills you need to embark on the study on Web Programming Languages"

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.

An intensive professional development program that will allow you to operate in a sector with growing demand for professionals.

The program's teaching staff includes professionals from the sector who pour their work experience into this Professional Master's Degree 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 learning designed 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 throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

The objective of this specialization is to train professionals in Web Programming Languages, with the necessary knowledge and skills to perform their work, using the most advanced protocols and techniques available. 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. A unique program designed by professionals with extensive experience in the sector.

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"

General Objectives

- Examine the characteristics of agile project management and determine the differences with predictive or traditional approaches
- Assimilate the key principles of agile mindset and practice
- Analyze the different agile methodologies and determine the best framework to adopt according to project characteristics
- Initiate, plan, execute, monitor, and close an agile project
- Lead and differentiate the roles of an agile team and recommend strategies for overcoming the challenges faced by dispersed or offshore agile teams

Specific Objectives

- Integrate applications developed in PHP with MySQL databases
- Master customer interaction process using forms, cookies and sessions
- Gain specialized knowledge of 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

Comprehensive yet focused; this program will provide you with the specific knowledge IT professionals need to compete among the best in the sector"

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 Web Programming Languages. 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 throughout the program. Therefore, students have the guarantees they need to specialise at an international level in a booming sector that will catapult them to professional success.

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
- "Grama: a web application for learning and generating creative language" - INTED2017 Proceedings
- Research in Human Language Technologies (TLH) - GPLSI (University of Alicante)

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. Thus, a program has been established with modules that offer a broad overview of Web Programming Languages. 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 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. 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. Library
- 1.1.6. Development Environments (IDE - Integrated Development Environment)
- 1.1.7. Browsers

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. Color
- 1.3.14. Variables
- 1.3.15. Animations

1.4. JavaScript
- 1.4.1. JavaScript
- 1.4.2. Code Inclusion in HTML
- 1.4.3. Syntax
  - 1.4.3.1. Statements
  - 1.4.3.2. Comments
- 1.4.4. Types of Data
- 1.4.5. Variables and Areas
- 1.4.6. Operators
- 1.4.7. Flow Control Structures
- 1.4.8. Functions
- 1.4.9. Document Object Model (DOM) Manipulation
- 1.4.10. Events
- 1.4.11. Object-Oriented Programming
  - 1.4.11.1. Classes
  - 1.4.11.2. Objects
    - 1.4.11.2.1. Properties
    - 1.4.11.2.2. Methods
- 1.4.12. AJAX

1.5. PHP
- 1.5.1. PHP
- 1.5.2. Documents Structure
- 1.5.3. Generating HTML Content
- 1.5.4. Constants and Variables
- 1.5.5. Operators
- 1.5.6. Types of Data
- 1.5.7. Flow Control Structures
- 1.5.8. Functions
- 1.5.9. Forms, Cookies and Sessions

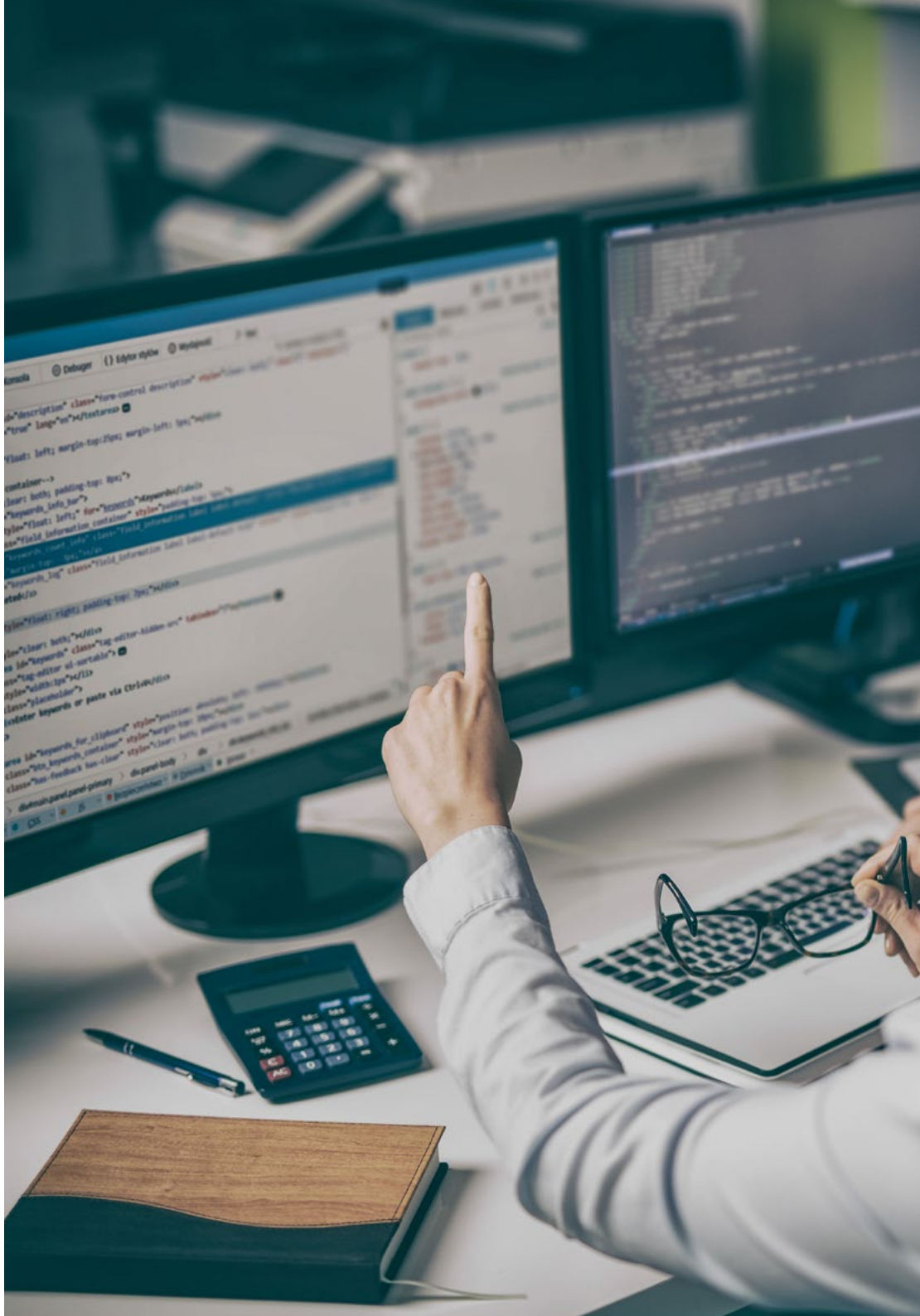
1.6. MySQL
- 1.6.1. MySQL
- 1.6.2. Databases
- 1.6.3. Characters Codification
- 1.6.4. Types of Data
- 1.6.5. Users and Privileges
- 1.6.6. Accessing Databases
- 1.6.7. Creating and Manipulating Databases
- 1.6.8. Clauses
- 1.6.9. Queries

1.7. HTML and CSS Libraries and Frameworks
- 1.7.1. Bootstrap
- 1.7.2. Foundation
- 1.7.3. Skeleton
- 1.7.4. Bulma
- 1.7.5. Materialize
- 1.7.6. PureCSS
- 1.7.7. TailwindCSS
- 1.7.8. Susy
- 1.7.9. UIkit

1.8. JavaScript Frameworks and Libraries
- 1.8.1. Angular
- 1.8.2. jQuery
- 1.8.3. React
- 1.8.4. Meteor
- 1.8.5. Polymer
- 1.8.6. Mithril
- 1.8.7. Aurelia
- 1.8.8. Vue.js
- 1.8.9. Ember.js
- 1.8.10. Node.js
- 1.8.11. Backbone.js

1.9. PHP Libraries and Frameworks
- 1.9.1. Laravel
- 1.9.2. Symfony
- 1.9.3. Zend
- 1.9.4. CodeIgniter
- 1.9.5. FuelPHP
- 1.9.6. CakePHP
- 1.9.7. Phalcon
- 1.9.8. Yii
- 1.9.9. Slim

1.10. Web Programming Techniques
- 1.10.1. Beautify
- 1.10.2. Minimizing Code
- 1.10.3. Image Optimization
  - 1.10.3.1. File Formats
  - 1.10.3.2. Compression Quality vs. Size
- 1.10.4. Code Normalization and Compatibility between Browsers
- 1.10.5. Code Debugging and Validation
- 1.10.6. Bundling
- 1.10.7. Repository and Version Control



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.

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

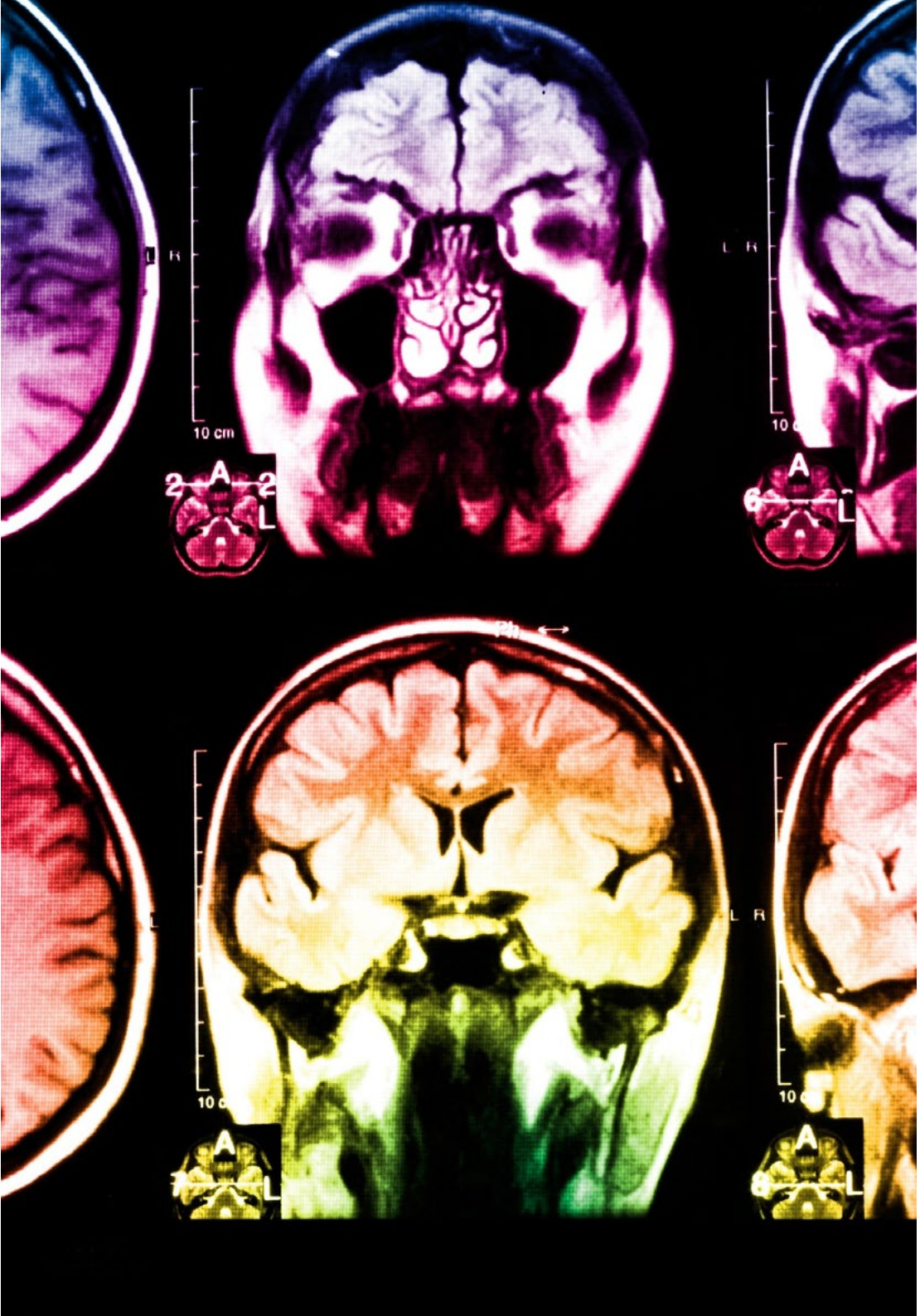
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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 adapted in 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.

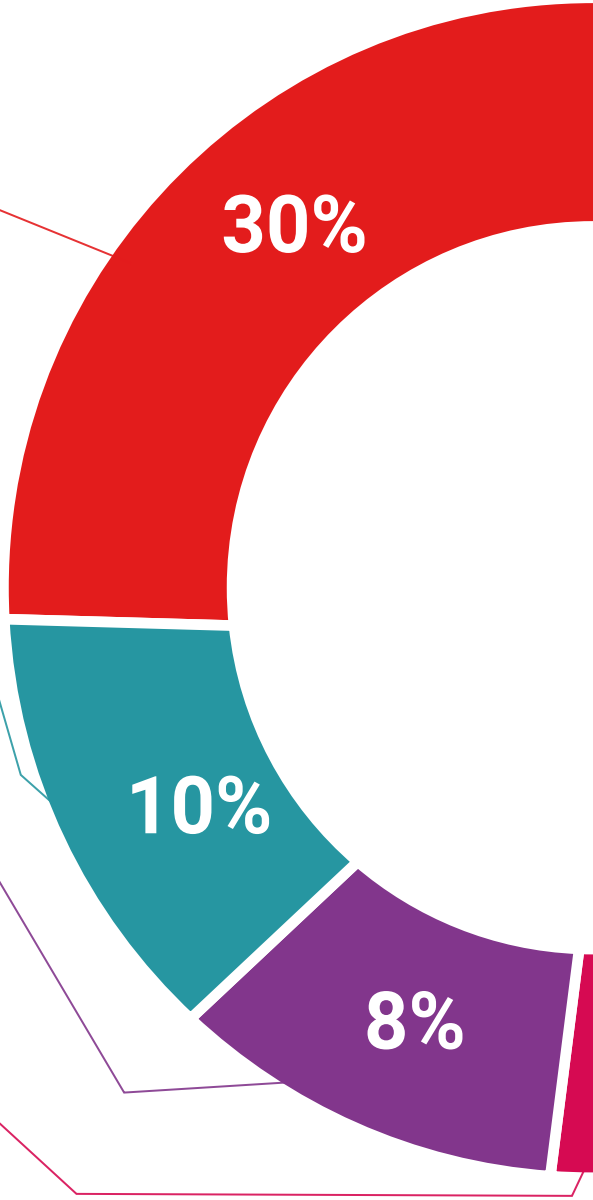
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

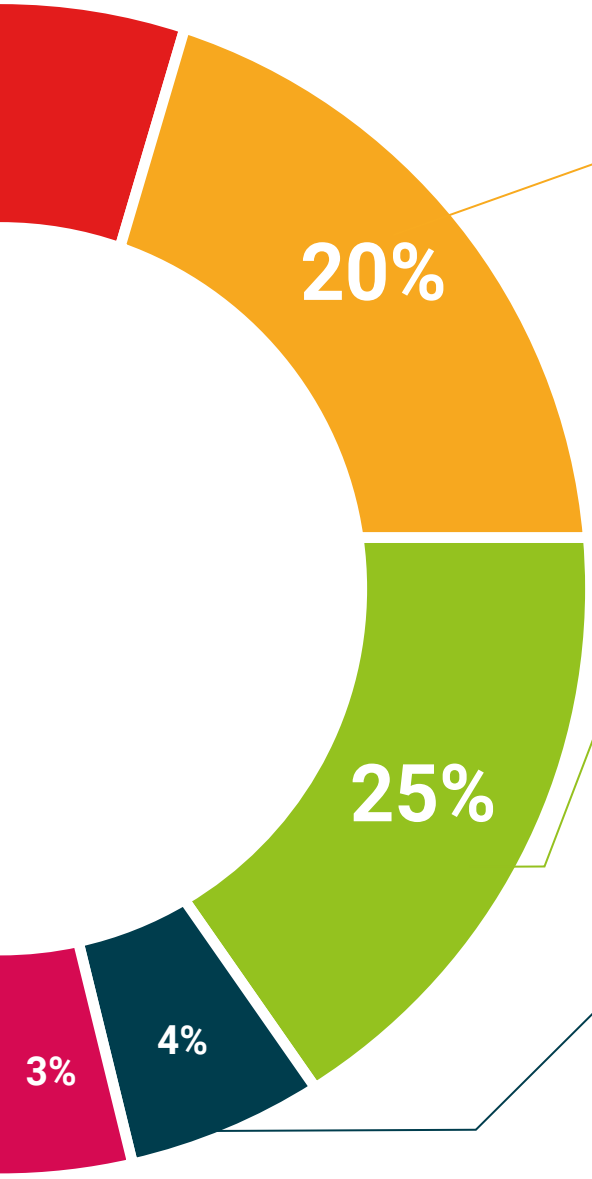
Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic 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 Web Programming Languages 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 Web Programming Languages** 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 diploma 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 Web Programming Languages**

Official Nº of Hours: **150 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Web Programming Languages

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

Tere Guevara Navarro

Dean

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 EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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Postgraduate Certificate
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