Postgraduate Diploma

Mobile Application Development Programming Languages

tech *technological university*

Postgraduate Diploma
Mobile Application Development Programming Languages

» Modality: **online**
» Duration: **6 months**
» Certificate: **TECH Technological University**
» Schedule: **at your own pace**
» Exams: **online**

Website: **www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-mobile-application-development-programming-languages**

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01
Introduction

One of the most widely used devices in the world to access the Internet and perform essential actions in everyday life is the cell phone, leading the market with the Android operating system, followed by iOS. Hence the relevance for application developers to gain in-depth knowledge and updates that arise within these ecosystems. This program will address the necessary tools in the production process in these pieces of software, as well as in Multiplatform Web Development oriented to mobile devices, until reaching its publication and monetization, through a cutting-edge methodology in the online educational environment and with an exclusive content chosen by experts.

Enjoy the experience of becoming a professional in a 100% online environment and recognized worldwide as the world's largest digital university"

The number of mobile device users has grown exponentially in recent years, and with it, the need to develop applications for the different mobile platforms available in order to reach as many users as possible. Although each platform has its own native development model, reaching all of them implies producing and maintaining different specific versions, in different programming languages and with different development environments.

There are alternatives that seek cross-platform development and reuse the same code base for all users, no matter what platform they are on. In this program you will about them, ensuring compatibility with multiple mobile platforms (and with the ability to deploy them on the web or even as desktop applications on PCs). For this, it is imperative to have specialized knowledge for building Apps with a common code base, allowing developers to focus on adding new functionalities that bring value to their users.

Similarly, in a few months professionals will improve the development tools needed to create an Android application, installation of libraries, the factors to take into account to monetize it and how to upload different versions to the Play Store and use Git to manage them. And finally, they will be able to create their own application on iOS and will be able to launch it on Apple's App Store since they will develop the Stack of technologies used in the industry to create functional and scalable projects.

All this deployed in a diverse content format, adjustable to a fully online platform, and a revolutionary pedagogical methodology, being able to specialize or improve their professional skills without giving up any of their current activities and responsibilities. Without the need to leave your home or office, resulting in a better quality of life and well-being. Therefore, in 6 months, students will acquire the precise basis to undertake consulting tasks in all aspects related to mobile technology, develop their own business or climb positions in their employment status.

This **Postgraduate Diploma in Mobile Application Development Programming Languages** 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 Mobile Application Development
- The graphic, schematic, and practical contents with which they are created, provide 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

The best decision is in your hands. Enroll now in this Postgraduate Diploma and learn the professional skills you need to shape your career as an App developer"

"Did you know that iOS is the second most used mobile operating system in the world? At the end of this program, you will have created your own iOS App and will be able to launch it on Apple's App Store"

You will master hybrid applications that combine the properties of web applications and native applications ensuring compatibility with multiple mobile platforms.

In this Postgraduate Diploma you will create an Android App and master all the factors to monetize it and publish it on Play Store.

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.

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive education programmed to prepare in real situations.

The design of this program focuses on Problem-Based Learning, by means of which professionals must try to solve the different professional practice situations that are presented to them throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Google Play

02
Objectives

The purpose of this program is that graduates master the languages implemented in the development of applications for mobile devices, within the Android, iOS and Multiplatform ecosystems as an expert, to launch it to the Play Store. Therefore, it has been structured in such a way that it meets all the requirements for the professionalization of the developer so that they can raise their profile and job aspirations in a market that is highly demanded and competitive.

TECH's objective is for you to achieve your goals. You can make the decision to start your professionalization now"

General Objectives

- Execute the design of architectures, iterations and user interfaces through the programming languages of the most representative mobile platforms on the market (Web, iOS and Android)
- Apply error control, testing and debugging mechanisms in mobile application development
- Master the practical knowledge to plan and manage technology projects related to mobile technologies
- Develop the skills, aptitudes and tools necessary to learn to develop mobile applications in an autonomous and professional manner, on multi-platform devices
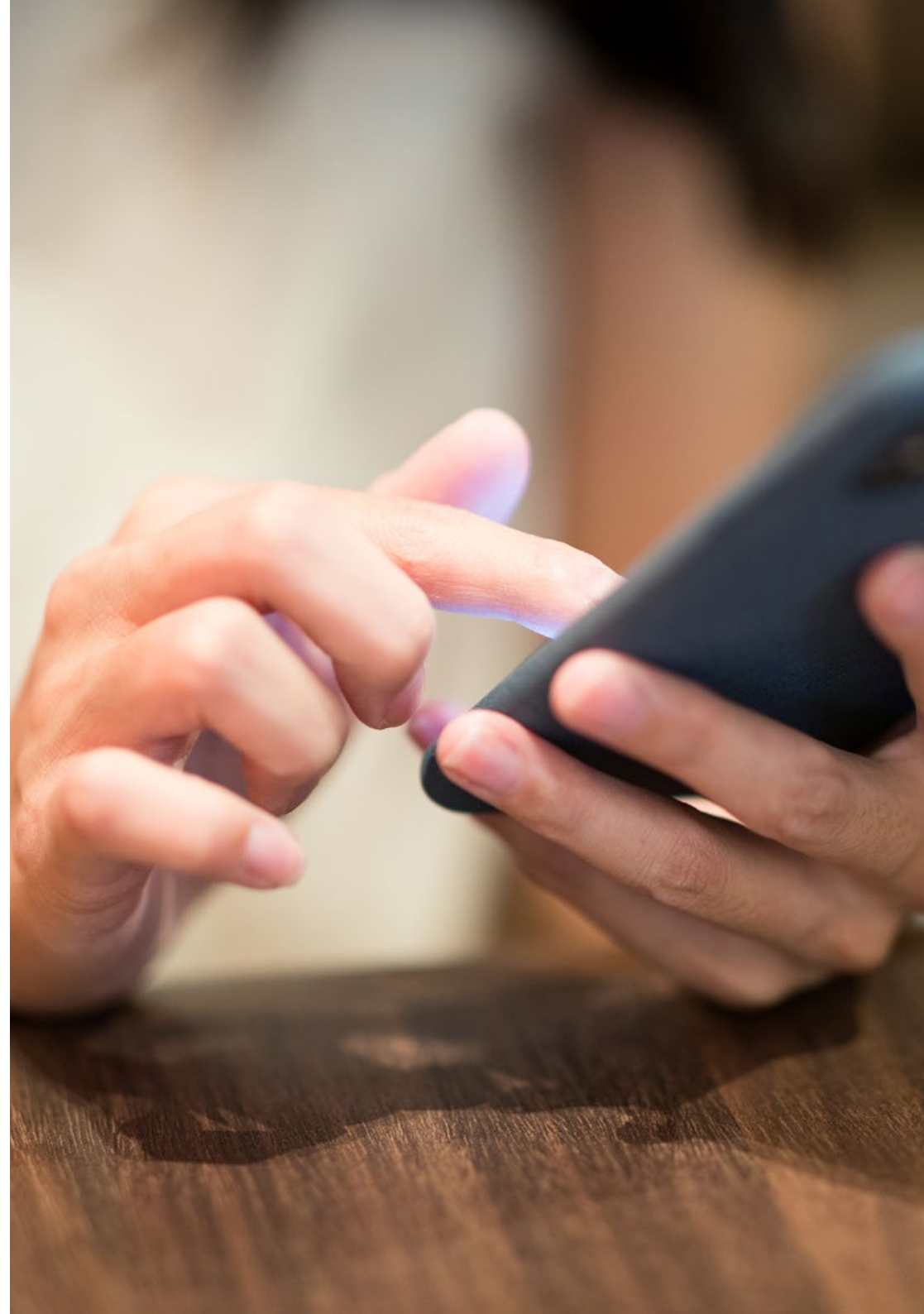
Specific Objectives

Module 1. Multi-Platform Web Development for Mobiles

- Determine the advantages and limitations of the native and hybrid App development model
- Examine the features and limitations of Progressive Web Apps (PWA)
- Analyze the main Frameworks for web application development: Angular, React, Vue
- Compile the main technologies for the development of multi-platform mobile applications Ionic and Flutter
- Analyze capabilities to deploy these hybrid Apps as Web or Desktop Apps on PCs
- Examine a model to choose the alternative best suited for the development of a specific application

Module 2. Application Development for Android Systems

- Develop an application in Kotlin
- Use Gradle to manage libraries
- Using Retrofit to connect our application to a RESTful API.
- Specify the basic requirements for the choice of a library
- Analyze a monetization system
- Design Responsive Views
- Publish an application on Play Store

Module 3. Application Development for iOS Systems

- Develop an application in Swift
- Use Cocoa Pods to manage libraries
- Make use of Alamofire to connect our application with a RESTful API.
- Specify the basic requirements for the choice of a library
- Develop a monetization system with ADMOB.
- Design views from code
- Publish an application in the App Store

You will have specialized knowledge about the different alternatives for the construction of multiplatform applications"

03
Course Management

This Postgraduate Diploma is taught by teachers with extensive knowledge and experience in new technologies, solution architecture and digital infrastructure, experts in Android programming and application developers. Their extensive experience offers a guarantee of quality of the content selected for this program, betting on the optimization of the learning process of professionals who seek in this space the contribution they need for their professional success.

> *Experts in Application Development and with TECH's teaching methods you will be guided throughout the process"*

Management

Mr. Olalla Bonal, Martín

- Senior Blockchain Practice Manager at EY.
- Blockchain Client Technical Specialist for IBM.
- Director of Architecture for Blocknitive
- Non-Relational Distributed Databases Team Coordinator for wedoIT (IBM Subsidiary)
- Infrastructure Architect at Bankia
- Head of Layout Department at T-Systems
- Department Coordinator for Bing Data España SL.

Professors

Mr. Villot Guisán, Pablo

- Chief Information Officer, Chief Technical Officer and Founder of New Tech & Talent
- Technology Expert at KPMG Spain
- Blockchain Architect at Everis
- J2EE Developer Commercial Logistics Area in Inditex
- Degree in Computer Engineering from the University of La Coruña
- Microsoft MSCA certification: Cloud Platform

Mr. Noguera Rodríguez, Pablo

- Software engineer applied to Blockchain solutions at EY
- Mobile app developer at Bitnovo
- Developer of native iOS apps at Umani and Stef
- Freelance Programmer creator of Aviaze App, in collaboration with Starman Aviation

04
Structure and Content

To optimize the learning process in this Postgraduate Diploma in Mobile Application Development Programming Languages, the teaching staff has rigorously chosen an exclusive content that will allow the graduate to understand in a few months the development of applications within iOS, Android and Multiplatform ecosystems oriented to Mobile Devices. There will be 3 modules in which the necessary concepts and tools to be mastered by professionals will be deployed, shown in different formats and with meeting rooms, private chat, communities of experts and open forums that will mark a before and after in the specialization.

You will be able to interact with specialized professionals and broaden your knowledge"

Module 1. Multi-Platform Web Development for Mobiles

1.1. Multi-Platform Web Development
- 1.1.1. Multi-Platform Web Development
- 1.1.2. Hybrid Apps vs. Native Apps
- 1.1.3. Technologies to Create Hybrid Apps

1.2. Progressive Web Apps (PWA)
- 1.2.1. Progressive Web Apps (PWA)
- 1.2.2. Progressive Web Apps (PWA). Features
- 1.2.3. Progressive Web Apps (PWA). Construction
- 1.2.4. Progressive Web Apps (PWA). Limitations

1.3. Framework Ionic
- 1.3.1. Framework Ionic Analysis
- 1.3.2. Framework Ionic Features
- 1.3.3. Building an App with Ionic

1.4. Web Development Frameworks
- 1.4.1. Framework Analysis in Web Development
- 1.4.2. Web Development Frameworks
- 1.4.3. Web Frameworks Comparison

1.5. Angular Framework
- 1.5.1. Angular Framework
- 1.5.2. Using Angular in Multi-Platform Application Development
- 1.5.3. Angular + Ionic
- 1.5.4. Building Apps in Angular

1.6. React Development Library
- 1.6.1. JavaScript React Library
- 1.6.2. JavaScript React Library Use
- 1.6.3. React Native
- 1.6.4. React + Ionic
- 1.6.5. Building Apps in React

1.7. Vue Development Framework
- 1.7.1. Vue Development Framework
- 1.7.2. Vue Development Framework. Use
- 1.7.3. Vue + Ionic
- 1.7.4. Building Apps in Vue

1.8. Electron Development Frameworks
- 1.8.1. Electron Development Frameworks
- 1.8.2. Electron Development Frameworks. Use
- 1.8.3. Deploying Our Apps Also on Desktop

1.9. Flutter Mobile Device Development Tool
- 1.9.1. Flutter Mobile Device Development Tool
- 1.9.2. Use of Flutter SDK
- 1.9.3. Building Apps in Flutter

1.10. Development Tools for Mobile Devices. Comparison
- 1.10.1. Tools for Mobile Application Development
- 1.10.2. Flutter vs. Ionic
- 1.10.3. Selection of the Most Suitable Stack for Creating an App
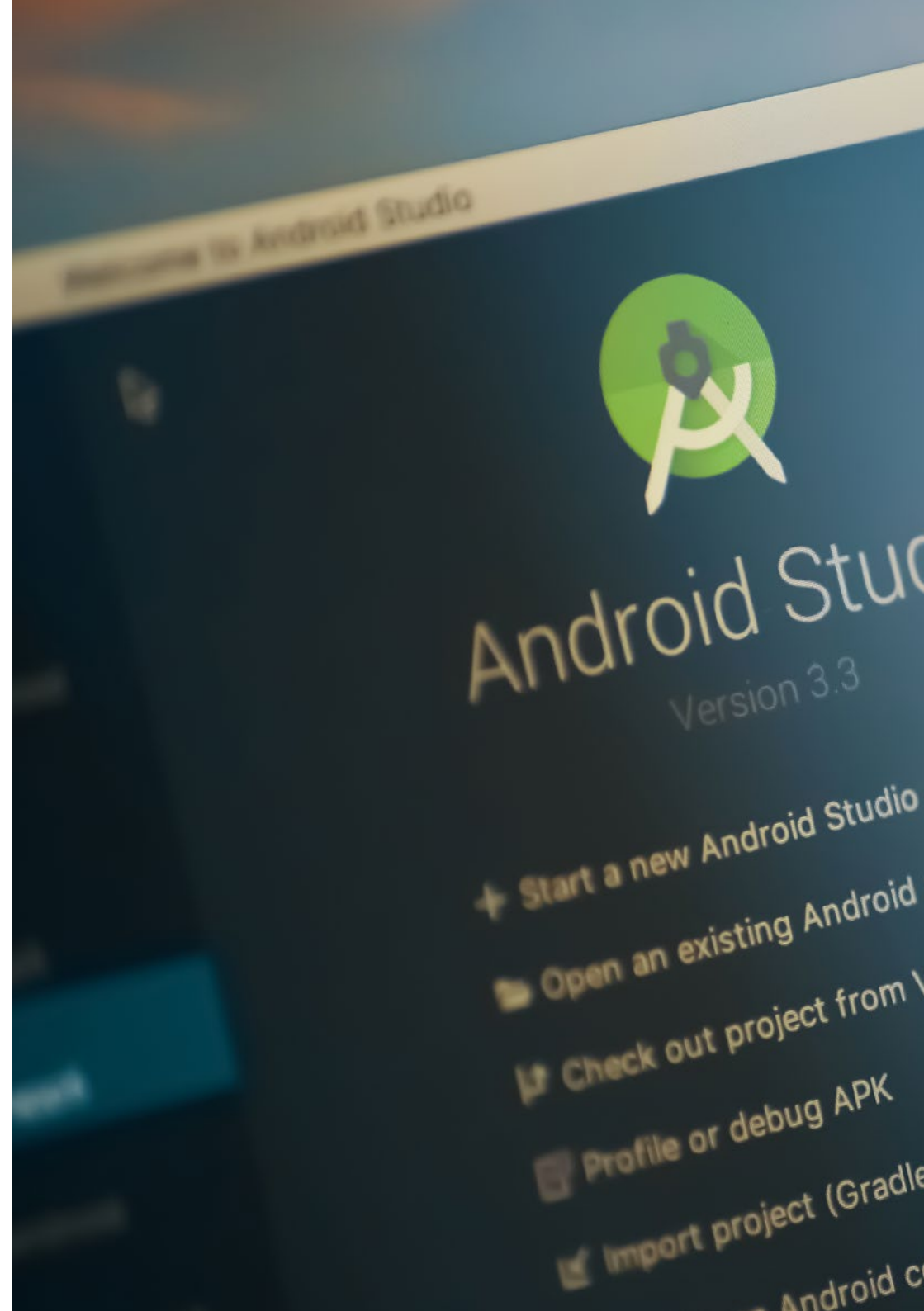
Module 2. Application Development for Android Systems

2.1. Android Studio
- 2.1.1. Creation of a Project
- 2.1.2. Configuration of an Emulator for Compiling
- 2.1.3. Configuration of a Physical Phone for Compiling

2.2. Kotlin Programming Language
- 2.2.1. Kotlin I: Kotlin Programming Language
- 2.2.2. Kotlin II: Functions and Loops
- 2.2.3. Kotlin III: Lambdas and Interfaces

2.3. Libraries and Gradle
- 2.3.1. Gradle Programming Library
- 2.3.2. Library Implementation
- 2.3.3. Build Flavors

Module 3. Application Development for iOS Systems

Choose where you want to study from because this program is 100% online. And with the best content to become a Postgraduate Diploma"

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.

tech

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.

20%

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".

25%

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.

4%

3%

06
Certificate

The Postgraduate Diploma in Mobile Application Development Programming Languages guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Mobile Application Development 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 Diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Mobile Application Development Programming Languages**

Official Nº of hours: **450 h.**

tech technological university

Awards the following

DIPLOMA
to

Mr./Ms. _____ with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA
in

Mobile Application Development Programming Languages

This is a qualification awarded by this University, equivalent to 450 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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