

# Postgraduate Certificate

Mobile Application

Development Tools





## Postgraduate Certificate Mobile Application Development Tools

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

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/mobile-application-development-tools](http://www.techtute.com/us/information-technology/postgraduate-certificate/mobile-application-development-tools)

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# 01

# Introduction

The mobile application sector is one of the giants of the global technology market. As the years go by, new applications are becoming more and more necessary to improve the user experience and the trends point to the automation of almost all processes. For this reason, programmers must develop new, indispensable technical skills to design quality software that meets the demands of the market. To this end, and in order for computer scientists to master the Mobile Application Development Tools, this 6-week refresher program has been created with the most innovative methodology in the global digital university sector.







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*Learn more about the different tools used in the development of applications for mobile devices. Boost your career with this refresher program"*

On average, 22 million people use mobile apps every day. Between 4 and 5 million apps are downloaded every day for cell phones, tablets and TVs. Therefore, keeping abreast of trends in the world of technology it's necessary to focus on a development sector, and mobile applications is necessarily one of constant change and unstoppable growth.

Augmented reality, biometrics, emotional intelligence, gestures are some of the evolutions that are being incorporated in the field of Mobile Apps. Knowing how to develop the right software is the professional's task; in that sense, they must incorporate algorithmic thinking and generate specialized knowledge to carry out the installation and configuration of the most up-to-date tools in the industry.

This Postgraduate Certificate in Mobile Application Development Tools addresses the fundamental concepts to generate quality software: Git, GitHub, Command Terminal and other tools. It also explains the key concepts of programming and the Internet, how the Web works, as well as programming paradigms, logical structures, design principles, algorithm analysis and other relevant aspects.

This will be described with a syllabus selected by computer engineers who are experts in the subject, and that, for its exemplification and easy understanding, the study methodology, besides being completely online, is based on real problems and cases that lead the student to discern the concepts from another point of view. The combination of multimedia resources, audiovisual formats and theoretical-practical material make the learning process dynamic, to be completed in a maximum of 6 weeks.

This **Postgraduate Certificate in Mobile Application Development Tools** 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



*If you want to expand your field of expertise or grow your own business in cross-platform mobile technology, this program is for you. Enroll now”*

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*Enhance the indispensable technical skills a programmer must acquire to develop quality software with this 100% online program”*

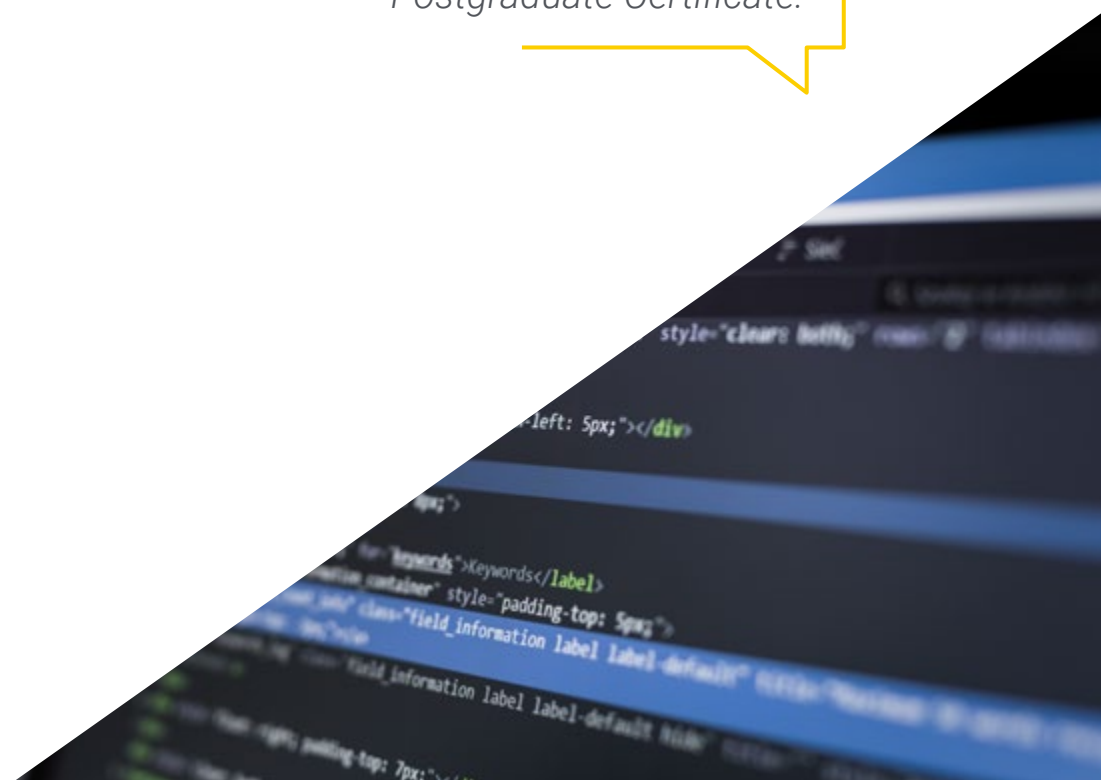
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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.

*You decide how, when and where to study. TECH provides you with everything you need for your professionalization in a completely virtual environment.*

*Git, GitHub, Command Terminal and other tools will be described in this Postgraduate Certificate.*



# 02 Objectives

That the IT professional understands and masters the tools and skills for the development of quality software, especially for mobile device applications, is the foundation of this refresher program, designed for a virtual environment and with a modern methodology that allows easy adaptation and evolution of the students, even allowing them to add what they have learned in their current development, perfecting their portfolio.





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*22 million people use mobile applications everyday. The need in the market for new efficient designs is incalculable. This program enables you to enter an evolving industry”*



## General Objectives

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- ◆ Analyze user needs and behavior in relation to mobile devices and their applications
- ◆ 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
- ◆ Address different practical and business cases for publishing, distributing and disseminating mobile applications in the main application markets
- ◆ 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
- ◆ Explore content related to app monetization and mobile marketing





## Specific Objectives

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- ◆ Prepare the development environment
- ◆ Acquiring command terminal skills
- ◆ Efficient use of the version control system
- ◆ Address the use of remote code versioning systems
- ◆ Establish the key notions of internet operation
- ◆ Develop relevant software programming concepts
- ◆ Examine data structures
- ◆ Review algorithm design and interpretation techniques

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*Expand your possibilities for professional growth. Update your knowledge in mobile application development. With this program, you will master the most current working tools”*



# 03

## Course Management

The possibility of sharing experience with renowned professionals in the field of new technologies, solution architecture and digital infrastructure, experts in Android programming and application developers, is what this refresher program offers you. Thanks to TECHs commitment to choose the best teachers to manage the program, professionals with more than 25 years of experience in the IT sector are managing this Postgraduate Certificate, aimed especially at those who are committed to improving their processes and want to provide innovative and efficient solutions in their work environments.





“

*A team of experts in new technologies and application developers will provide you with their most outstanding experiences and all the knowledge you need to raise your level of professionalism"*



## 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. Frias Favero, Pedro Luis

- ◆ Lead Blockchain Architect at E.Y
- ◆ Co-founder and Technical Director of Swear IT Technologies
- ◆ IT Support Director in Mexico, Colombia and Spain for Key Business One
- ◆ Degree in Industrial Engineering from Yacambú University
- ◆ Expert in Blockchain and Decentralized Applications from the University of Alcalá de Henares

### Ms. Del Vado Puell, Andrea

- ◆ Web Developer at Serquo
- ◆ Web Developer at Ribera Salud
- ◆ Software Developer at FutuRS
- ◆ Master's Degree in Application Development and Web Services at the International University of Valencia
- ◆ Degree in Computer Engineering at the Complutense University of Madrid
- ◆ Full Stack Developer MEAN Bootcamp at GeeksHubs Academy
- ◆ Full Stack Developer MEAN Certification

# 04

## Structure and Content

This program offers a complete syllabus in the area of Work Tools for Mobile Application Development, which describes the most up-to-date and indispensable concepts for the quality software developer. Students will be able to consult the entire syllabus from the first day, and the presentation in different written and audiovisual formats, through a modern and 100% online methodology, will provide the desired flexibility for those who need to professionalize without sacrificing their current activities.





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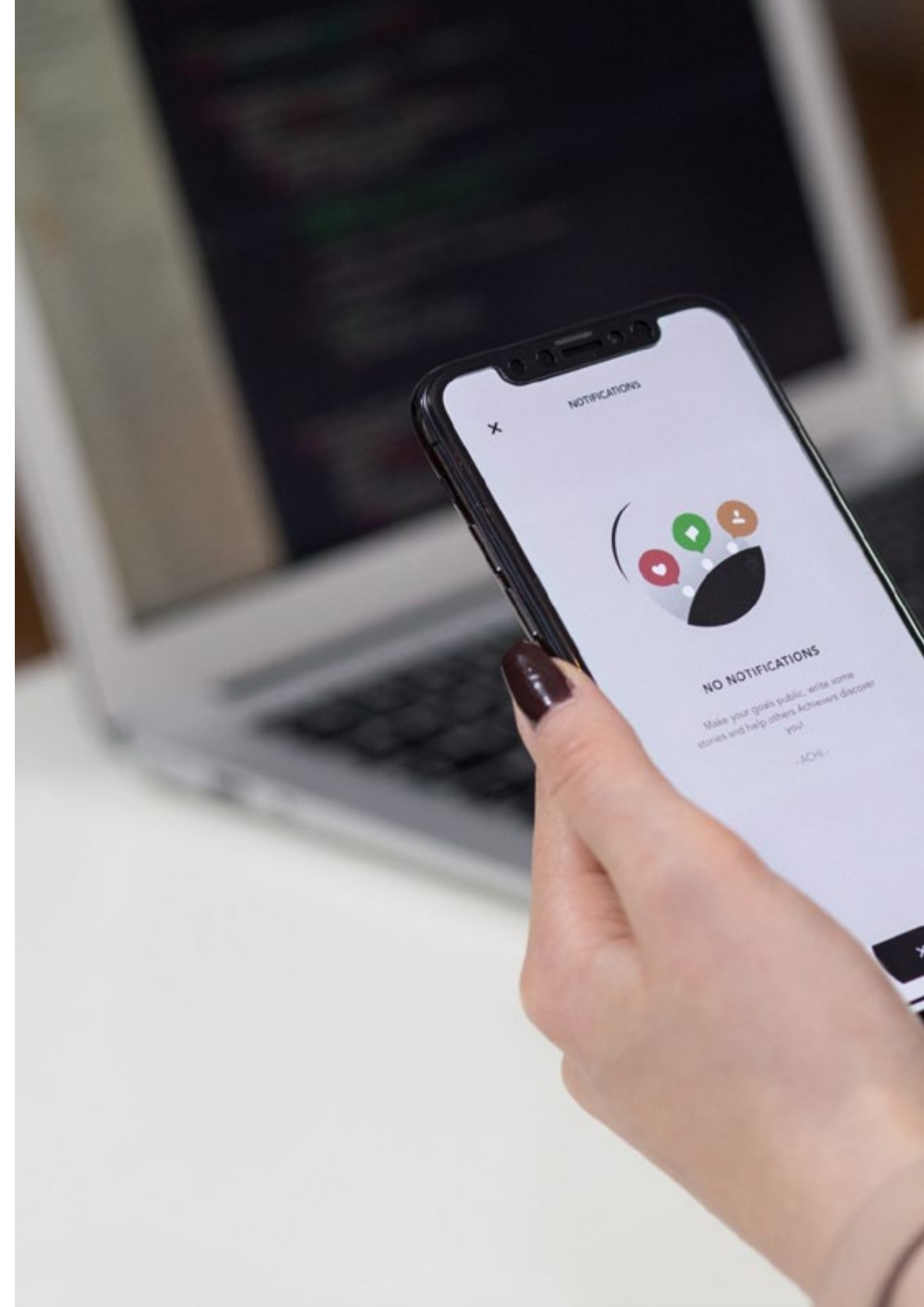
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*A program that offers you quality and comfort at the same time. Thanks to TECH Global University's exclusive methodology"*



## Module 1. Mobile Application Development Tools

- 1.1. Environment and Tools for the Development of Applications for Mobile Devices
  - 1.1.1. Preparation of the Environment for Mac OS
  - 1.1.2. Preparation of the Environment for Linux
  - 1.1.3. Preparation of the Environment for Windows
- 1.2. Command Line
  - 1.2.1. Command Line
  - 1.2.2. Emulators
  - 1.2.3. Command Interpreter
  - 1.2.4. Folder Creation
  - 1.2.5. File Creation
  - 1.2.6. Navigation
  - 1.2.7. Managing Files and Folders Using the Command Line Interface
  - 1.2.8. Licences
  - 1.2.9. SSH
  - 1.2.10. Command List
- 1.3. Software Repository. Git
  - 1.3.1. Version Control System
  - 1.3.2. Git
  - 1.3.3. Settings
  - 1.3.4. Repository
  - 1.3.5. Branches
  - 1.3.6. Branch Management
  - 1.3.7. Workflows
  - 1.3.8. Merge
  - 1.3.9. Commands
- 1.4. Web Service Version Control
  - 1.4.1. Remote Repositories
  - 1.4.2. Settings
  - 1.4.3. Authentication
  - 1.4.4. Branching of Software Fork
  - 1.4.5. Git Clone Command
  - 1.4.6. Repositories
  - 1.4.7. Github Pages





- 1.5. Advanced Development Tools for Applications on Mobile Devices
  - 1.5.1. Postman
  - 1.5.2. Visual Studio Code
  - 1.5.3. GUI for Databases
  - 1.5.4. Hosting
  - 1.5.5. Complementary Development Tools
- 1.6. Web from the Prism of Application Development for Mobile Devices
  - 1.6.1. Protocols
  - 1.6.2. Internet Service Provider
  - 1.6.3. IP Addresses
  - 1.6.4. DNS Name Services
- 1.7. Programming in the Development of Applications for Mobile devices
  - 1.7.1. Programming in the Development of Applications for Mobile devices
  - 1.7.2. Programming Paradigms
  - 1.7.3. Programming Languages
- 1.8. Application Development Components for Mobile Devices
  - 1.8.1. Variables and Constants
  - 1.8.2. Types
  - 1.8.3. Operators
  - 1.8.4. Declarations
  - 1.8.5. Loops
  - 1.8.6. Functions and Objects
- 1.9. Data Structure
  - 1.9.1. Data Structure
  - 1.9.2. Linear Structure Types
  - 1.9.3. Functional Structure Types
  - 1.9.4. Tree Structure Types
- 1.10. Algorithms
  - 1.10.1. Algorithms in Programming. Divide and Conquer
  - 1.10.2. Voracious Algorithms
  - 1.10.3. Dynamic Programming

# 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.





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*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.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



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

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

**“** *Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.



## Relearning Methodology

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

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

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



### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.





# 06 Certificate

The Postgraduate Certificate in Mobile Application Development Tools guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Mobile Application Development Tools** 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 Certificate in Mobile Application Development Tools**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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