

Postgraduate Certificate Databases for Mobile Application Development



Postgraduate Certificate Databases for Mobile Application Development

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

Official N° of hours: **150 h.**

Website: www.techtute.com/in/information-technology/postgraduate-certificate/databases-mobile-application-development

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01 Introduction

More and more companies are looking for a mobile way to connect with the end user. This need has led to a diversification of development trends. And one of the issues that most occupies computer scientists in this case is the management of data persistence. One of the particularities of mobile applications in this field is the local storage space, limited by the device and its connectivity, sometimes offline. Understanding each of the databases and knowing in which cases they are most appropriate is part of what professionals need. In this program all the most up-to-date knowledge related to the subject will be made available through a methodology based on Relearning and 100% online.





Understand the main models of Database development for Mobile Applications with this Postgraduate Certificate"

Every mobile application needs data to function, and databases have always been the most common way to store and manage data. To access it, a fairly active and fast network connection is needed. However, to make applications more responsive and less dependent on network connectivity, the trend of offline usage or less dependency on the network is gaining popularity, to be more functional even when there is no or limited Internet connectivity.

This Postgraduate Certificate provides the most up-to-date knowledge about the main databases used in mobile development, analyzing how each one is developed, studying different types of development with SQLite, Oracle Berkeley DB, Realm, CouchDB Lite, with MySQL and Neo4j centralized databases, among other specialties.

Thanks to an exclusive syllabus selected by computer engineers who are experts in the subject, and a 100% online study methodology, with innovative systems such as Problem Based Learning and *Relearning* lead students to discern the concepts from a different point of view and memorize them in a fast and agile way. A variety of multimedia resources, audiovisual formats and theoretical-practical material will make the learning process dynamic and achievable in 6 weeks.

This **Postgraduate Certificate in Databases for Mobile Application Development** 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



Advance towards your professionalization in the most demanded and exclusive topics in the field of IT. With TECH Technological University you will be at the forefront"

“

This Postgraduate Certificate will provide you with specialized knowledge about the different Databases for Mobile Application Development"

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 will master the development of environments with different storage capacities with Firebase, Core Data, Visual Builder Cloud Service.

TECH offers you the study methodology that is revolutionizing the global university environment.



02 Objectives

This Postgraduate Certificate addresses the efficient use of databases, providing students with specific knowledge of the most commonly used databases, to determine in which cases they are most appropriate, with an understanding of the most up-to-date procedures focused on different technologies, thereby generating an adequate management of the persistence of data in each case, which will enhance the professional performance of graduates in each of the projects they undertake.



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It is not enough to know how to do it, but to know how to do it well. This program provides you with the most up-to-date and functional knowledge"



General Objectives

- ◆ 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

- ◆ Identify the best database model in relation to the characteristics of the mobile application
- ◆ Establish the capabilities of each of the database systems
- ◆ Determine the differences between the different databases
- ◆ Examine how to connect to and load/extract data from different types of databases
- ◆ Analyze the basic capabilities of development environments with database capabilities including

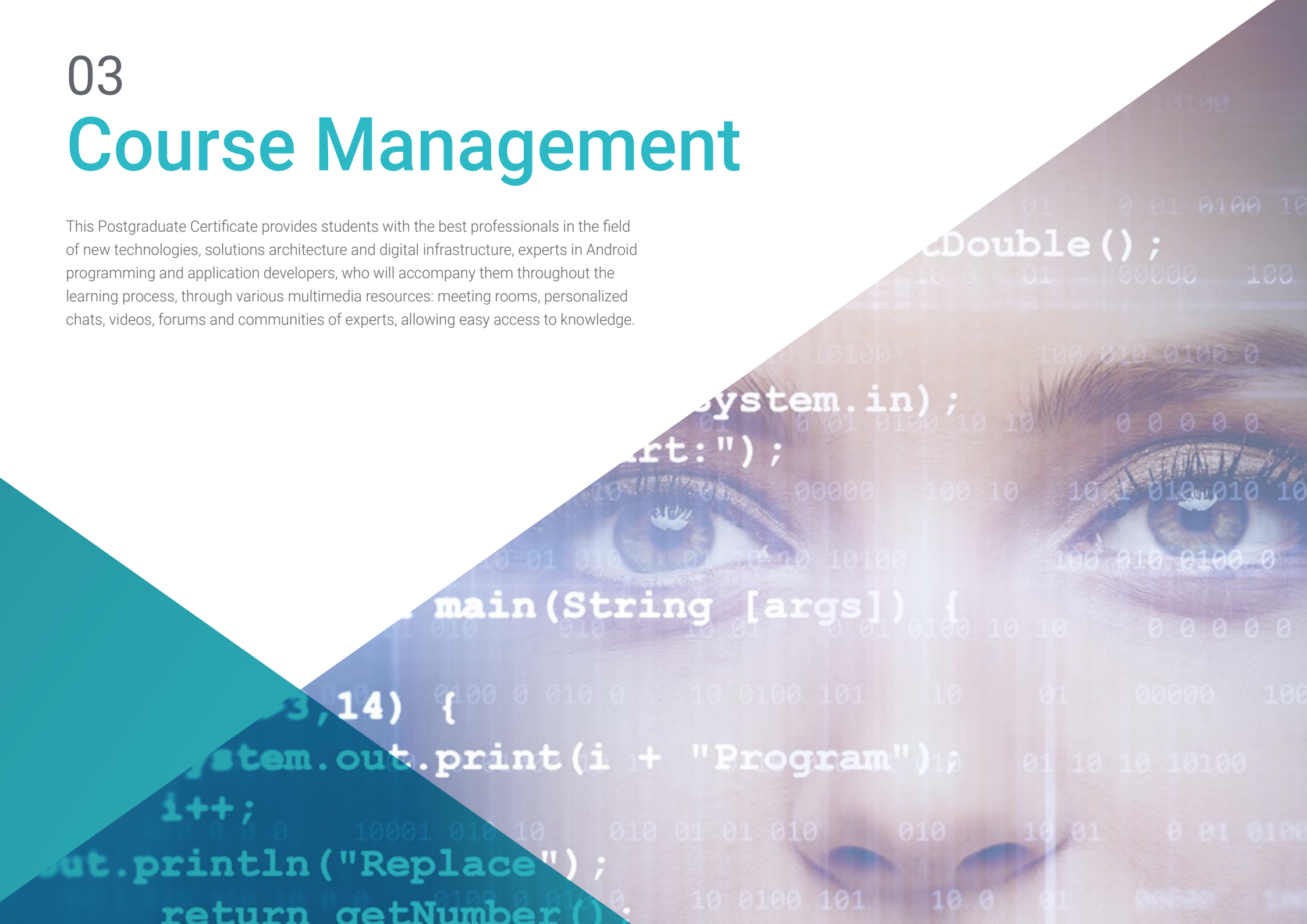
“

Master the most demanded database management systems nowadays”

03

Course Management

This Postgraduate Certificate provides students with the best professionals in the field of new technologies, solutions architecture and digital infrastructure, experts in Android programming and application developers, who will accompany them throughout the learning process, through various multimedia resources: meeting rooms, personalized chats, videos, forums and communities of experts, allowing easy access to knowledge.



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Project Managers in important business groups are leading this program and will help you 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. Gómez Rodríguez, Antonio

- ♦ Principal Cloud Solutions Engineer for Oracle
- ♦ Co-organizer of Málaga Developer Meetup
- ♦ Specialist Consultant for Sopra Group and Everis
- ♦ Team Leader at System Dynamics
- ♦ Software Developer at SGO Software
- ♦ Master's Degree in E-Business from La Salle Business School
- ♦ Postgraduate Degree in Information Technologies and Systems, Catalan Institute of Technology
- ♦ Degree in Telecommunications Engineering from the Polytechnic University of Catalonia



04

Structure and Content

In order to learn all about Databases for Mobile Application Development, TECH has designed an exclusive program with the most up-to-date and functional content for all those computer scientists who wish to raise their level of professionalism. A syllabus described in depth, with a plethora of multimedia resources and practical theoretical material that will make the learning process much more dynamic and agile, suitable for a 100% online methodology based on Relearning, undoubtedly the most advanced system in today's university environment.

A man with glasses is shown in profile, looking towards the right. He is wearing a light-colored denim jacket. The background is a blurred computer screen displaying code. Overlaid on the image is a semi-transparent teal triangle in the bottom-left corner. The code visible on the screen includes:

```
..._mod.use_y = True
...or_mod.use_z = False
...operation == "MIRROR_Z":
mirror_mod.use_x = False
mirror_mod.use_y = False
mirror_mod.use_z = True
```


“

Today, you need to be specialized in modern and flexible environments that provide you with the most functional content. TECH makes it possible, enroll now"

Module 1. Databases for Mobile Application Development

- 1.1. Databases in Mobile Devices
 - 1.1.1. Data Persistence in Mobile Application Development
 - 1.1.2. Database Capabilities for Mobile Apps
 - 1.1.3. SQL Structured Query Language
- 1.2. Choice of Database for Mobile Applications
 - 1.2.1. Database-Driven Analysis of Applications in Mobile Devices
 - 1.2.2. Database Categories
 - 1.2.3. Database Overview
- 1.3. Development with SQLite
 - 1.3.1. SQLite Database
 - 1.3.2. Model Deployment
 - 1.3.3. Connection to SQLite
- 1.4. Development with Oracle Berkeley DB
 - 1.4.1. Berkeley DB Database
 - 1.4.2. Model Deployment
 - 1.4.3. Connection to Berkeley DB
- 1.5. Development with Realm
 - 1.5.1. Realm Capabilities
 - 1.5.2. Database Creation in Realm
 - 1.5.3. Connection to Realm
- 1.6. Development with CouchDB Lite
 - 1.6.1. CouchDB Lite Database
 - 1.6.2. Database Creation with CouchDB Lite
 - 1.6.3. Connection with CouchDB Lite



- 1.7. Development with MySQL Centralized Database
 - 1.7.1. MySQL Database
 - 1.7.2. Deployment of Relational Model with MySQL
 - 1.7.3. Connection to MySQL
- 1.8. Centralized Developments. Oracle, MS SQL Server, MongoDB
 - 1.8.1. Development with Oracle
 - 1.8.2. Development with MS SQL Server
 - 1.8.3. Development with MongoDB
- 1.9. Graph Type Data
 - 1.9.1. Graph Oriented Database
 - 1.9.2. Database Creation with Neo4j
 - 1.9.3. Connection to Neo4j from the Mobile App
- 1.10. Environments with Storage Capacities
 - 1.10.1. Firebase Developments
 - 1.10.2. Core Data Developments
 - 1.10.3. Visual Builder Cloud Service Development

“ Add value to your current performance, with a specific qualification that meets the demands of the work environment”



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



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

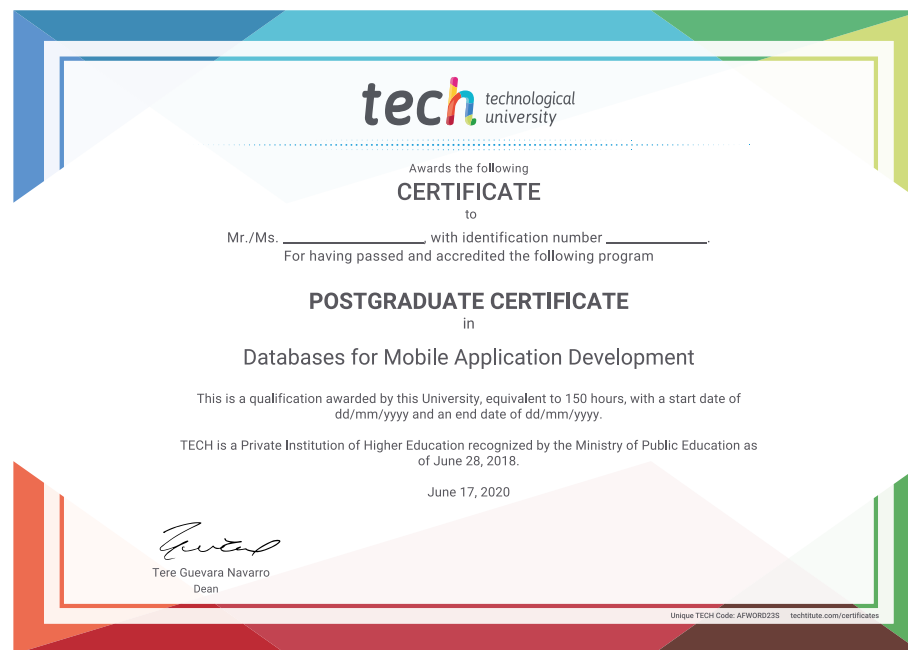
This **Postgraduate Certificate in Databases for Mobile Application Development** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Certificate in Databases for Mobile Application Development**

Official N° of Hours: **150 h.**



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

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



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Duration: 6 weeks

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Official N° of hours: 150 h.

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