

Postgraduate Certificate

Android Application Life
Cycle: Cloud, Play
Store and Versioning



Postgraduate Certificate

Android Application Life Cycle: Cloud, Play Store and Versioning

- » Modality: **online**
- » Duration: **6 weeks**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: www.techtute.com/us/information-technology/postgraduate-certificate/android-application-life-cycle-cloud-play-store-versioning

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01

Introduction

In recent years, the world has undergone a great transformation due to new technologies. Among them are mobile applications, which can carry out numerous activities and offer services of all kinds in a simple and fast way. While it is true that many have already become obsolete or have been pushed aside by better ones, it is necessary to know the life cycle of an application, which is composed of all the stages that emphasize its program. With this program the student will acquire the keys to be able to identify from the initial idea of their application until the users stop using it, and from the conception and implementation of its update.





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This Postgraduate Certificate will enable you to establish the milestones and processes for verification and validation of your applications to ensure the quality of the work produced"



Being a good programmer is only part of the job, knowing how to coordinate code with the code of other colleagues is also important, but it is useless to develop new functionalities very quickly if, when taking them to production, they take longer. Faced with the increasing complexity of application development projects, it has become necessary to formalize the way a project's life cycle is managed.

The practice of Continuous Integration and Continuous Deployment is an essential part of software development and is based on different concepts, technologies and tools that will be analyzed throughout the module that makes up this program. Deploying a simple application already requires some coordination and is always associated with some risk, such as tasks that are performed incorrectly, difficulties in finding out who has touched what, unclear rollout or rollback processes, and so on.

This Postgraduate Certificate relies on automated pipelines that ensure the integration, delivery and continuous deployment of software in a repeatable, predictable and fast way. In the Android ecosystem, these practices also exist, which help save time and money for larger companies and smaller startups.

A 100% online Postgraduate Certificate that provides the student with the ease of being able to study it comfortably, wherever and whenever they want. All you need is a device with internet access to take your career one step further. A time-sensitive approach with all the guarantees that ensure full traceability, an efficient quality process and better interaction between all partners for your applications.

This **Postgraduate Certificate in Android Application Life Cycle: Cloud, Play Store and Versioning** contains the most complete and up-to-date program on the market.

The most important features include:

- ◆ Practical cases presented by experts in Android 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
- ◆ 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



Thanks to this complete program you will learn how to manage the life cycle of the program, from its initial idea to its production and maintenance phase, through its design, implementation and validation"



Specialize with this Postgraduate Certificate in requirements management, software architecture, change management, continuous integration, project management and versioning"

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.

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 knowledge programmed to learn in 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.

Proper application life cycle management provides a framework for software development and will allow you to manage your systems over time.

This program will teach you how to realize the essential factors to develop applications ready to support CI & CD processes.



02 Objectives

The main objective of this program is to introduce the computer scientist to the life cycle of applications, the steps to follow and the way in which they have to be kept active. In this way, the student will have the keys to increase the number of downloads of their applications and enrich the user experience. Therefore, at the end of this program, the professional will be in possession of all the necessary knowledge to delve into this complex field that requires constant updating.



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You will be able to identify practices, use cases, technologies and tools of the continuous integration & continuous deployment ecosystem”



General Objectives

- ◆ Compile the different stages of a continuous integration cycle focused on Android development
- ◆ Justify the need for each of its stages
- ◆ Propose a generic and reusable implementation system
- ◆ Specify the different platforms for its implementation

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You will be able to make your applications more useful thanks to the professional tools that you will learn in this Postgraduate Certificate”





Specific Objectives

- ◆ Realize the benefits of adopting an automated release deployment model
- ◆ Establish the differences between continuous integration, continuous delivery and continuous deployment
- ◆ Define the main features of DevOps
- ◆ Evaluate some of the fundamental tools for implementing CI/CD pipelines
- ◆ Identify the essential factors for developing applications ready to support CI/CD processes
- ◆ Examine Container Technologies as a fundamental pillar of CI/CD
- ◆ Identify practices, use cases, technologies and tools of the CI/CD ecosystem

03

Course Management

This Postgraduate Certificate has an expert faculty that will guide the student throughout the learning process, ensuring that the student obtains the latest and deepest knowledge about the Android Application Life Cycle: Cloud, Play Store and Versioning. Therefore, at the end of this program, the developer will be in a position to immediately apply everything learned throughout the program in their professional career.





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Become an IT expert in Android Application Life Cycle: Cloud, Play Store and Versioning with the best teachers”

International Guest Director

Colin Lee is a **successful mobile application developer**, specializing in **native Android code**, whose influence extends internationally. The Postgraduate Diploma is an **authority in the Twin Cities area and in the handling of Kotlin**. One of his most recent contributions was to demonstrate, in live code, how to **quickly build a browser** using the aforementioned programming language and Mozilla's open source browser components for Android.

In addition, his applications have been linked to globally significant companies. For example, he was in charge of **creating digital solutions for Pearson**, one of the largest international publishers. He also developed a low-level Android video recorder for the startup Flipgrid, later acquired by Microsoft.

He also built a successful Android VPN for a large client in the **consulting world**. In turn, he is the creator of a freight management tool implemented by the transnational **Amazon** to facilitate the work of its contracted truckers. On the other hand, he has helped build the **mobile versions of the Firefox browser** for Mozilla.

Today, he performs work as a contractor, including **code reviews and security checks**. His impact on mobile application development and his experience over the years make him a leading figure in the global technology arena.



Mr. Lee, Colin

- Director at ColinTheShots LLC
- Android Software Engineer for Specto Inc.
- Senior Android Engineer for Mozilla
- Software Development Engineer for Amazon
- Mobile Application Engineer for Flipgrid
- Software Configuration Specialist for Pearson VUE
- Bachelor's Degree from the University of Florida

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Thanks to TECH you will be able to learn with the best professionals in the world”

Management



Mr. Olalla Bonal, Martín

- ◆ Current Blockchain Technical Specialist at IBM SPGI
- ◆ Digital Electronics Technician
- ◆ Blockchain Architect
- ◆ Infrastructure Architect in Banking
- ◆ Hyperledger Fabric training to companies
- ◆ Business-oriented companies Blockchain training
- ◆ Project management and implementation of solutions
- ◆ More than 25 years of experience in the IT world

Professors

Mr. Noguera Rodríguez, Pablo

- ◆ Native App Developer (iOS & Android)- Starman Aviation (Aviaze App)
- ◆ Native App Developer (iOS) - Stef (Mtrack App)
- ◆ Native App Developer (iOS & Android) - Bitnovo (Bitnovo App)
- ◆ Expert Java Developer: JSE, JEE and Android - Ilabora Formación
- ◆ Android Applications Programming - EOI - Madrid



04

Structure and Content

This Postgraduate Certificate in Android Application Life Cycle: Cloud, Play Store and Versioning is composed of a specialized module in which the IT specialist can delve into issues such as logistical testing, integration, continuous delivery and deployment, *Firestore* *Test Labor* Gradle configuration. Thus, with this innovative knowledge, students will be able to face their work incorporating the latest skills in this field, knowing that they have the support of a team of experts.



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An expertly designed module and quality content to ensure efficient application life cycle traceability”

Module 1. Android Application Life Cycle: Cloud, Play Store and Versioning

- 1.1. Software Life Cycle
 - 1.1.1. Software Life Cycle
 - 1.1.2. Agile Methodologies
 - 1.1.3. The Continuous Agile Software Cycle
- 1.2. Manual Product Development
 - 1.2.1. Manual Integration
 - 1.2.2. Manual Delivery
 - 1.2.3. Manual Deployment
- 1.3. Supervised Integration
 - 1.3.1. Continuous Integration
 - 1.3.2. Manual Revision
 - 1.3.3. Static Automatic Revisions
- 1.4. Logical Tests
 - 1.4.1. Unit Tests
 - 1.4.2. Integration Test
 - 1.4.3. Behavior Tests
- 1.5. Continuous Integration
 - 1.5.1. Continuous Integration Cycle
 - 1.5.2. Dependencies between Integrations
 - 1.5.3. Continuous Integration as a Repository Management Methodology
- 1.6. Continuous Delivery
 - 1.6.1. Continuous Delivery: Types of Problems to Be Solved
 - 1.6.2. Continuous Delivery: Problem-Solving
 - 1.6.3. Advantages of Continuous Delivery
- 1.7. Continuous Deployment
 - 1.7.1. Continuous Deployment: Types of Problems to Be Solved
 - 1.7.2. Continuous Deployment: Problem-Solving





- 1.8. Firebase Test Lab
 - 1.8.1. Configuration from GCloud
 - 1.8.2. Jenkins Configuration
 - 1.8.3. Use of Jenkins: Advantages
- 1.9. Gradle Configuration
 - 1.9.1. Gradle Automation System
 - 1.9.2. Gradle Build Flavors Component
 - 1.9.3. Gradle Lint Component
- 1.10. Android Application Lifecycle. Example
 - 1.10.1. SemaphoreCI and GitHub Configuration
 - 1.10.2. Configuration of Work Blocks
 - 1.10.3. Promotions and Deployment

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A program in line with the constant IT advances and the changing technological market”

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.

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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.



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

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.

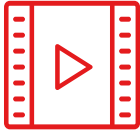
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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

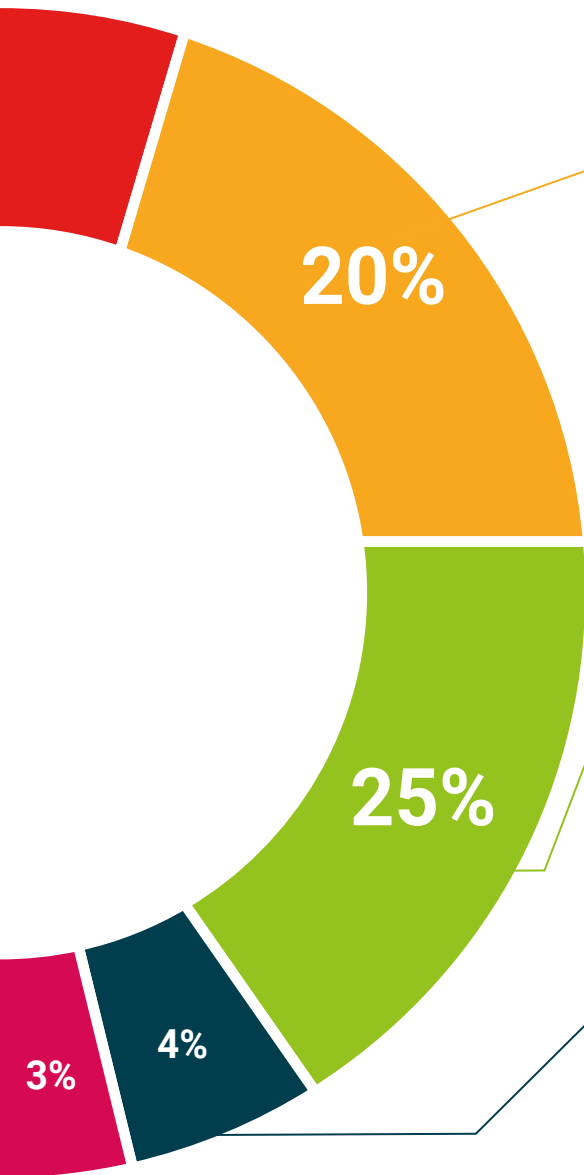
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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

This Postgraduate Certificate in Android Application Life Cycle: Cloud, Play Store and Versioning 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 Android Application Life Cycle: Cloud, Play Store and Versioning** contains the most complete and up-to-date program 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 Android Application Life Cycle: Cloud, Play Store and Versioning**

Official N° of Hours: **150 h.**



*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.

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



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