Postgraduate Certificate
Android Programming Language

tech *technological university*

Postgraduate Certificate
Android Programming Language

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

Website: **www.techtitute.com/pk/information-technology/postgraduate-certificate/android-programming-language**

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01
Introduction

Android is currently the most widely used mobile operating system in the world; with a market share of around 90%. It is responsible for the dizzying progress that the sector has undergone, and today, our life would not make sense without many of the applications that are based on this technology. Cell phone functionalities as basic as GPS location have become indispensable, and the possibilities in this field are endless. In this sense, the program contemplates structural, architectural and security elements of the Android system. Without ceasing to emphasize the advances in design and the possibilities of development. Always, with the intention of preparing professionals who respond to the needs of a sector in constant evolution.

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" *At TECH, we are committed to a long term vision in the field of technology"*

The arrival of 5G and the widespread presence of mobile devices and connected elements has made Android one of the key elements of today's technology ecosystem. In addition, the levels of processing and speed achieved in recent years continually generate new and spectacular applications such as virtual and augmented reality.

The versatility and endless possibilities offered by Android make this technology a very interesting field of study. For the opportunities it currently offers, but, above all, for those it may offer in the coming years.

Therefore, TECH offers a curriculum that responds to the current and future needs of the sector. Understanding the importance of deepening the structural elements that make up the Android architecture and how they are related. With the intention of generating professionals capable of building and programming functional applications for different areas of daily life.

A syllabus that, in addition, is taught 100% online, without timetables and in multiple formats. This makes it easier to reconcile work and personal life. With a methodology based on Relearning and endorsed by the most prestigious quality certification agencies.

This **Postgraduate Certificate in Android Programming Language** contains the most complete and up-to-date educational program on the market. The most important features include:

- Practical cases presented by experts in Android Programming Language
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development
- Practical exercises where the self assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies in Android Programming Language
- 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

The possibilities offered by Android technology are endless, you can be the one to discover them"

"*What makes Android special compared to other operating systems? To this and many other questions you will find answers in this Postgraduate Certificate*"

TECH will provide you with the fundamentals on which the future evolution of Android is based.

Learn everything you need to develop your own mobile application.

The program includes, in its teaching staff, professionals from the sector who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

The multimedia content, developed with the latest educational technology, will provide professionals with situated and contextual learning, i.e., a simulated environment that will provide immersive education, designed for learning 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.

02
Objectives

The student will know in depth the elements that make up an Android system. As well as the advances that are currently taking place in the different areas of this technology. For example, the system's native libraries will be analyzed, the benefits of Android compared to other platforms will be studied and the application market will be assessed. All this with a view to defining the possibilities that Android technology will offer in the future. Specifically, these are the general and specific objectives established by TECH for graduates.

TECH offers fully up to date content so that you can anticipate the evolution of technology and the market"

General Objectives

- Determine the structural elements of an Android system
- Define the basic architecture of an Android system
- Examine the enhancements that Android has incorporated into its design
- Analyze the security elements included in the Architecture and how to use them
- Establish the points of attention in Android development

Become an expert in the world's most widely used mobile operating system"

Specific Objectives

- Examine the Linux kernel and virtual machine on the Android base
- Analyze native system libraries
- Establish the benefits of Android over other platforms
- Determining the elements of an Android application
- Introduce Android versions and their enhancements
- Evaluate the market for Android applications
- Fundamentals of Android's future evolution

03
Course Management

TECH provides students with professionals of the highest level in the field of Android technology. Experts with very high general and specific expertise, who are also referents in their respective fields of work; and who will provide students with the tools and advice necessary to know the operation and possibilities of the Android System in its entirety.

TECH teachers are industry professionals who are involved and aware of the evolutions taking place"

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

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. Villot Guisán, Pablo

- Cloud Architect, Exponential Solutions and Subject Mater Expert Blockchain at KPMG
- Cloud Architect, Exponential Solutions and Subject Mater Expert Blockchain Integration at Everis
- Developer and Technical Manager of web and heavy desktop applications for the Commercial Logistics area of Inditex, Connectis
- Degree in Computer Engineering from the University of La Coruña
- Microsoft MSCA certification: Cloud Platform

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

Mr. Guerrero Díaz-Pintado, Arturo

- Professional services consultant working with leading-edge organizations in Europe, the Middle East and Latin America since IBM
- Outstanding collaborations in renowned universities and higher education centers in subjects related to technology such as Artificial Intelligence, Internet of Things, Cloud, Customer Experience and Digital Transformation
- Technical Presales Engineer across Watson Customer Engagement portfolio (Marketing and Customer Experience solutions) within Spain, Portugal, Greece and Israel at IBM
- R&D Network Engineer at Telefónica
- Graduate in Telecommunications Engineering from the University of Alcalá and the Danish Technical University

Mr. Pérez Rico, Javier

- Current Android Technical Lead at Nologis
- Android Technical Lead at Seekle
- Androif programmer at Gowex-Ideup
- Junior Android Programmer at Tecnocom
- Speaker at the II iTest Symposium, E@tic2011
- Degree in Technical Computer Engineering of Systems at the Complutense University of Madrid
- Master's Degree in Research at the Complutense University of Madrid

Mr. Jiménez Pérez, Carlos

- Senior Android Developer at OnTheSpot - Telefónica Tech
- Automatic and Electronic Engineering
- Master's Degree in Electronic Systems and Applications Engineering
- Associate Professor at Carlos III University of Madrid

Mr. Marcano Van Grieken, Alejandro Antonio

- Product Manager - Vikua, Remote (Jira, SCRUM, Figma, Slack, Notion)
- Backend Developer - InnovativeGX
- Systems Engineering Degree, Metropolitan University of Caracas, Venezuela
- Master in Cybersecurity, University of León Online

Mr. Arevalillo González, Emilio

- DBA Oracle BBVA
- Assistant Project Manager Archibus Solution Center Spain
- Backend developer atTelefónica I+D
- Degree in Computer Engineering from the Polytechnic University of Madrid
- Master's Degree in Software and Systems from Polytechnic University of Madrid

Mr. Arranz, Héctor

- Software Project Manager at Ezenit
- Degree in Software Engineering at the Complutense University of Madrid
- Master MBA Power Leaders by The Power MBA Teaching Experience
- Digital skills trainer at Three Life
- Digital skills trainer at Fundacion Esplai
- Assistant professor of the multi-platform application development degree at MEDAC
- Support for entrepreneurship work at Complutense University of Madrid
- Digital skills trainer at Three Life and Fundacion Esplai
- Entrepreneurship consultant at Cink Venturing
- Adjunct professor of the multiplatform application development degree at MEDAC

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Structure and Content

The structure is designed in an organic way, starting with general knowledge and moving on to more specific areas. In addition, the final part reviews the new features of Android applied to elements of everyday life. The syllabus begins with an analysis of the Android platform and its architecture. It delves into the study of the Linux kernel, native libraries, the file and data system, security, structural components and the different versions of Android. Finally, it focuses on the impact that the use of Android can have on vehicles, home automation, Wearable and Internet of Things.
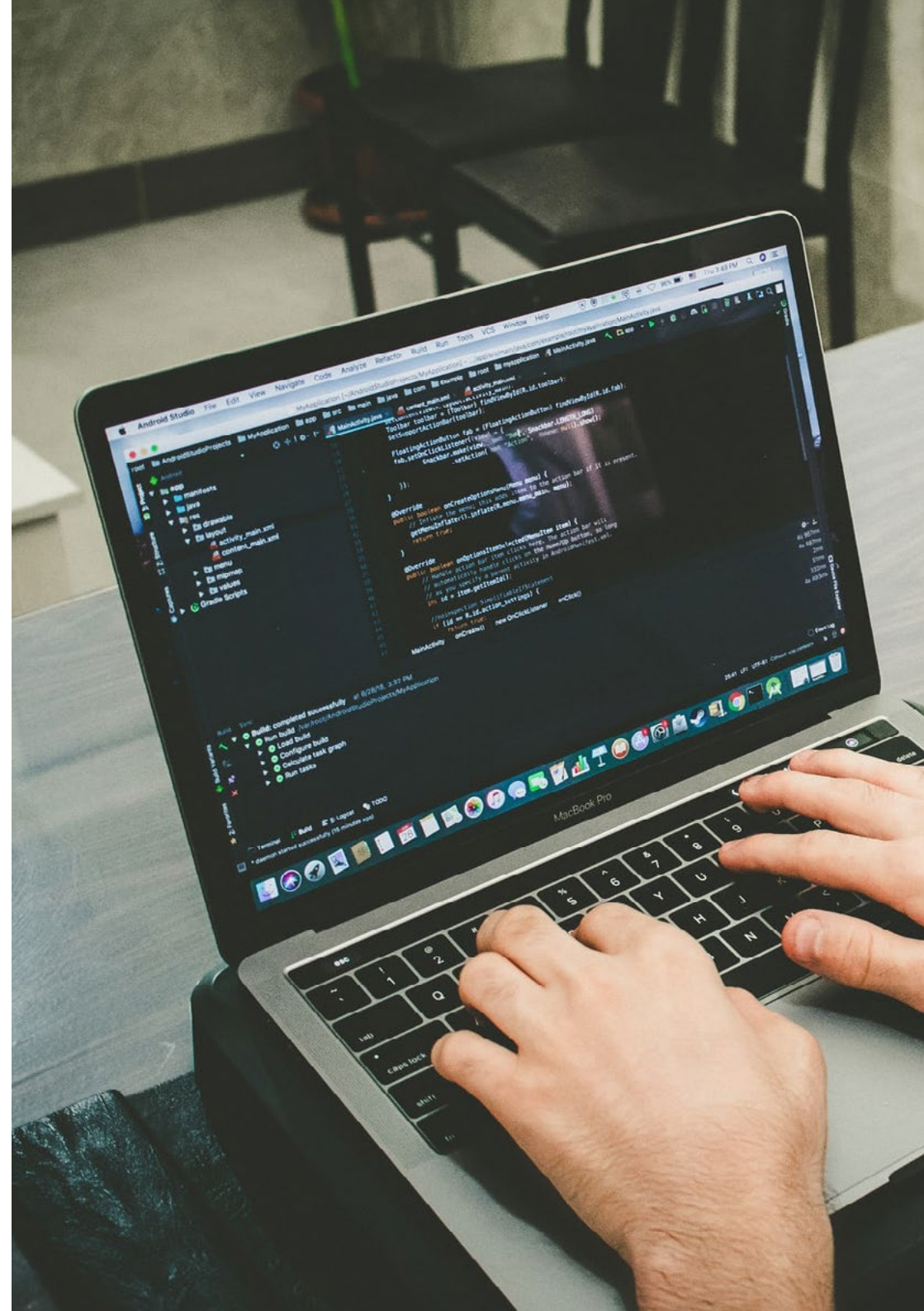
An in depth review of the Android System focused on putting the acquired knowledge into practice"

Module 1. Android Programming Language

1.1.   Android Platform

    1.1.1.   Android Platform

    1.1.2.   Android Operating System

    1.1.3.   Open Handset Alliance in Android Development

1.2.   Android Architecture

    1.2.1.   Architectural Elements of an Android System

    1.2.2.   Communication between Elements

    1.2.3.   Extensibility of the Android Architecture

    1.2.4.   Machine Resource Management: Battery and Memory

    1.2.5.   Android Emulators

1.3.   Android Linux Kernel

    1.3.1.   Composition of the Kernel

    1.3.2.   Structural Elements of the Kernel

    1.3.3.   Dalvik Virtual Machine

    1.3.4.   The Android Runtime Virtual Machine (ART)

1.4.   Native Android Libraries

    1.4.1.   Native Android Libraries

    1.4.2.   Support Library

    1.4.3.   Native Libraries and Extensibility

1.5.   The Android File and Data System

    1.5.1.   Structure of a Typical Android Application

    1.5.2.   YAFFS2 and ext4 File System

    1.5.3.   Use of SQLite and Room for Data Management

1.6.   Android Security

    1.6.1.   Permission Systems

    1.6.2.   Digital Signatures in the Android Application Package (apk)

    1.6.3.   Execution of Processes in the Kernel

    1.6.4.   Execution Threads and Events

A program designed to put technology at the service of everyday problems"

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.

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.

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.

20%

25%

4%

3%

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 Android Programming Language 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 Android Programming Language** 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 Android Programming Language**

Official Nº of hours: **150 h.**

tech technological university

Awards the following
CERTIFICATE
to

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

POSTGRADUATE CERTIFICATE

in

Android Programming Language

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: AFWOR023S   techtitute.com/certificates

*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.

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