Postgraduate Diploma
Android Application Design

Postgraduate Diploma
Android Application
Design

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

Website: **www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-android-application-design**

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01
Introduction

Android is present on millions of devices in a wide variety of screen sizes and shapes. Defining a design methodology for visual elements and screens is essential when developing an application in this operating system. As well as taking into account the needs, in terms of appearance and functionality, of the different devices and systems that exist and that are appearing on the market. In this program, you will gain the knowledge to understand Android Application Design in its complexity, down to the fundamentals to make a successful project. Through a 100% online study methodology with the most up-to-date content selected by experts to graduate in a maximum of 6 months.

"*In a world where change is incessant, professionals must be up to date. That is why TECH, offers you programs such as this Postgraduate Diploma in Android Application Design. To take your career to the next level"*

With the advent of 5G communications and the widespread presence of mobile devices and connected elements, Android is undoubtedly one of the key elements of the current technological ecosystem. Gradually we are reaching levels of processing and speed far superior to those previously achieved, which drives the creation of new and spectacular applications such as Virtual and Augmented Reality where Android is beginning to demonstrate its versatility.

Therefore, it is necessary to go deeper into the structural elements that make up an Android architecture and how they are related in order to understand how to build and program it. These considerations must be taken into account when designing new systems and making the most of their capabilities in all areas where today they have become essential elements.

On the other hand, good development should focus on how the product looks on different devices to show a homogeneous, familiar appearance and take advantage of the particularities of each device. These particularities may involve different resolutions, different screen sizes or increased resource availability. Adopting a responsive design is not optional; it is essential to adapt to the nature of the device. In addition to the fragmentation in terms of terminals and the large audience of the platform, the user experience must be adapted.

In this sense, this Postgraduate Diploma in Android Application Design, combines all the necessary knowledge to develop within this operating system and develop good projects that achieve success within the universe of options that exist. For this reason, a module is dedicated to the development of advanced knowledge on how to create, design and analyze what experience users will have on the way to conversion, with the most advanced tools and techniques and specific methodologies such as Design Thinking that allow working in a new, more dynamic and user-centered environment.

It should be noted that the methodology implemented for the study of all this knowledge is based on Relearning, which facilitates learning by avoiding additional efforts by the student and greater investments of time, achieving their qualification in a period not exceeding 6 months. Likewise, the TECH Technological University platform has the necessary interactive means to make communication between the teaching staff and the student fluid, as well as providing the dynamism that this type of subject requires with practical applications based on real problems.

This **Postgraduate Diploma in Android Application Design** 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 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 the self-assessment process can be carried out 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

Learn everything you need to know about the Android Application Design process and the creation of a differential User Experience that allows you to make your projects successful"

"

TECH brings this 100% online program, where you will learn to Design Android Applications in a Postgraduate Diploma in a maximum of 6 months. Enroll now"

Solving the various problems encountered in multi-device development will be possible after studying this Postgraduate Diploma.

With this program you will be able to understand how to build and program a project in Android Architecture.

The program's teaching staff includes professionals from sector who contribute their work experience to this training 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.

Objectives

This Postgraduate Diploma in Android Application Design, aims to prepare the professional to create successful projects within the Android architecture, managing everything about the programming language and its architecture for multi-platforms, providing the best user experience. Therefore, being up to date with the needs of the market and staying at the forefront of the concepts and styles that are handled, to obtain professional development and expand their business opportunities.

Achieving professional goals is only possible with determination and preparation. This Postgraduate Diploma will make a difference on your resume"

General Objectives

- Determine the structural elements of an Android system

- Develop a methodology for optimal data management on the device

- Analyze use cases for Android devices on the market

- Master the elements of responsive design and overcoming the challenges associated with it

- Compile the different stages of a continuous integration cycle focused on Android development
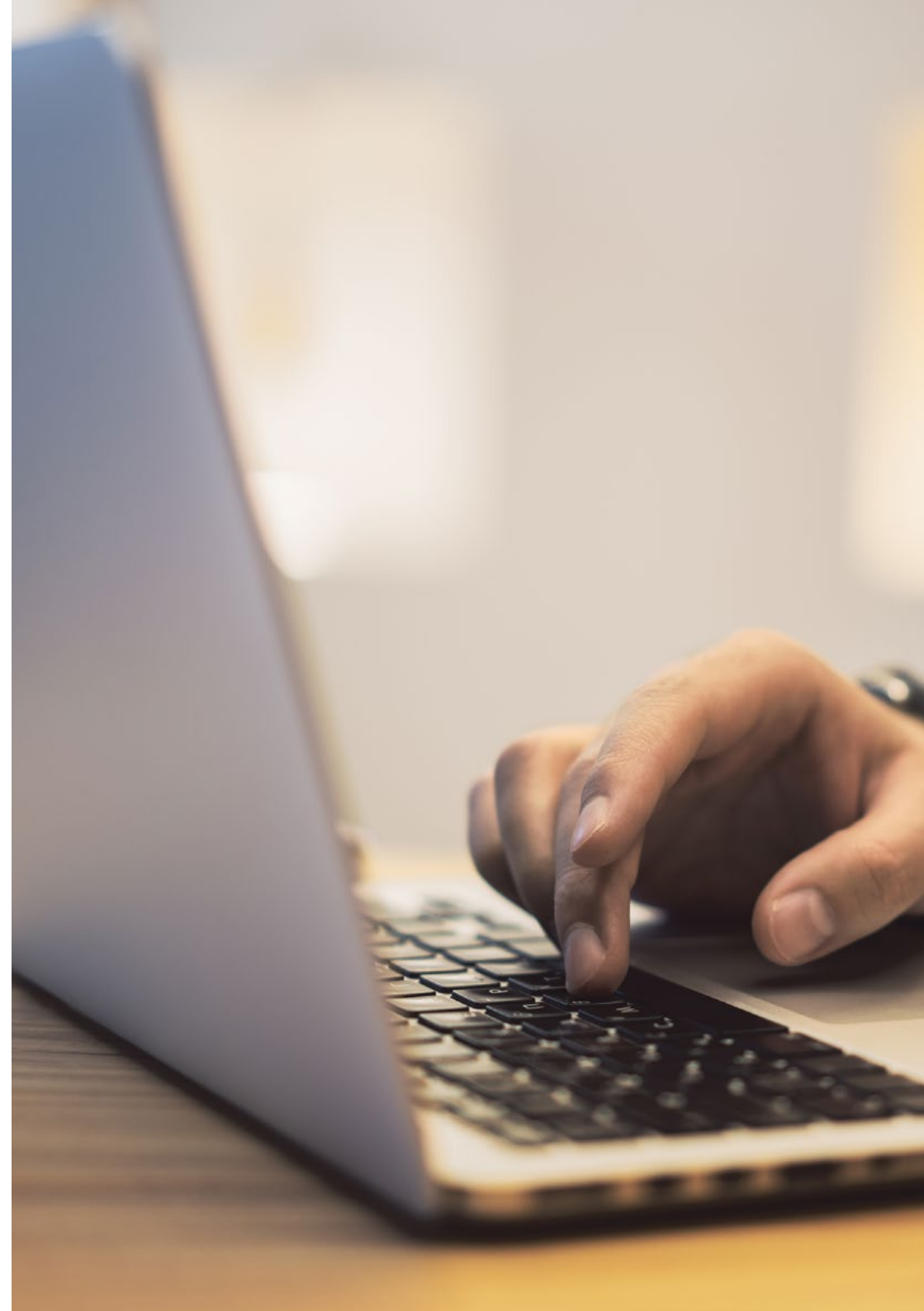
Specific Objectives

Module 1. Android Programming Language

- 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

Module 2. Responsive Design in Android

- Analyze the main elements of a design
- Define a visual design methodology and a screen design methodology
- Solve the various problems encountered in multi-device development
- Have tools to generate better and more resources for multi-device development
- Examine alternative frameworks to native responsive development
- Generate a unique methodology to develop applications using best practices for multi-device visualization from the beginning of the project

Module 3. Android Application Marketing

- Analyze new user-centric methodologies
- Determine how Artificial Intelligence has taken CX to the next level
- Establish the importance of accessibility and mobility
- Develop state-of-the-art session and behavioral analytics techniques
- Specify micro-personalization objectives during the user journey
- Compile new methodologies for a changing and lively environment
- Propose prototyping techniques

Learn the most advanced tools that will allow you to design more useful and adaptable applications"

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Course Management

For the management of this program, TECH has chosen leading professionals in the field of new technologies, solutions architecture and digital infrastructure, experts in Android programming and application developers lead this Postgraduate Diploma. Those who are committed to optimizing the learning process of students, who seek in this program the contribution they need for their professional success. Therefore, they are advised and accompanied throughout the process through the exclusive virtual platform of the largest digital university in the world.
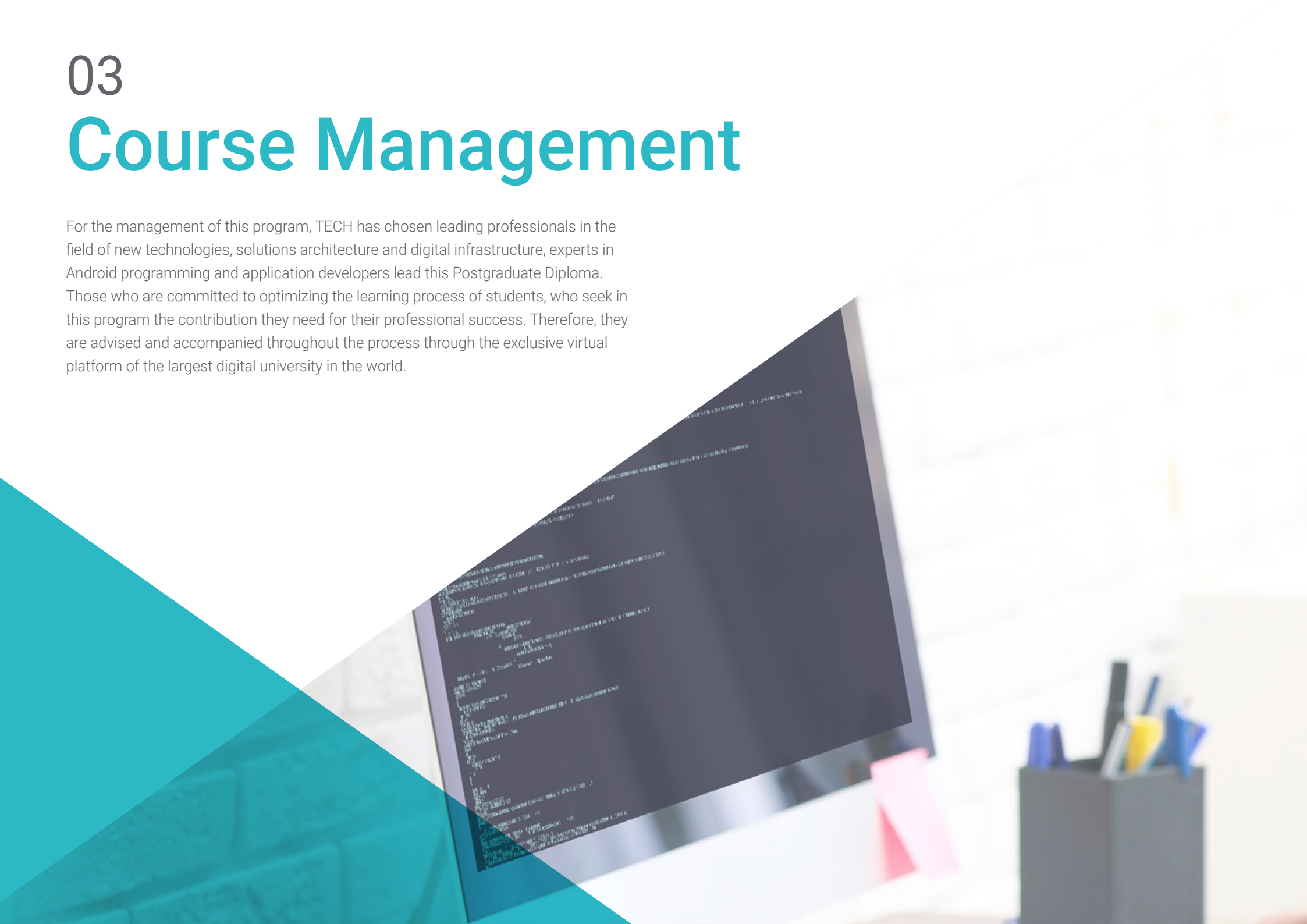
TECH's platform provides you with the necessary interactive means to feel accompanied at all times"

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. 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. 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 content of this program has been distributed in 3 modules that comprise all the concepts, techniques and tools to master for the correct Android Application Design, from understanding the structural elements of the operating system, mastering the particularities and characteristics of each format to create more comfortable user experiences, developing more intuitive, useful and successful applications. With practical cases based on real problems and different theoretical and audiovisual formats. Implementing an online methodology that provides flexibility and convenience to the student, being able to graduate in a few months.

Specialize in an agile and dynamic way with a 100% online methodology. With exclusive content designed by experts for you"

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

1.7.   Structural Components of a Standard Application
  1.7.1.   View
  1.7.2.   Activity
  1.7.3.   Fragment
  1.7.4.   Service
  1.7.5.   Intent
  1.7.6.   Broadcasts Receiver and Content Provider
  1.7.7   Data Management and User Preferences

1.8.   Android Versions
  1.8.1.   Android Versions
  1.8.2.   Deployment of Android Versions
  1.8.3.   Dispersion of Android Distributions
  1.8.4.   Android vs. Apple iOS and Other Mobile Systems

1.9.   Android for Vehicles
  1.9.1.   Android and the Automotive World
  1.9.2.   Structural Elements in an Automotive Android System
  1.9.3.   Communication between Devices

1.10.   Android in Home Automation, Wearables and Internet of Things (IoT)
  1.10.1.   The Connected World
  1.10.2.   Structural Elements in an Android Home Automation System
  1.10.3.   Elements of Android Wearable
  1.10.4.   Android in the Internet of Things (IoT)

Module 3. Marketing in Android Applications

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.

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Certificate

The Postgraduate Diploma in Android Application Design 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"*
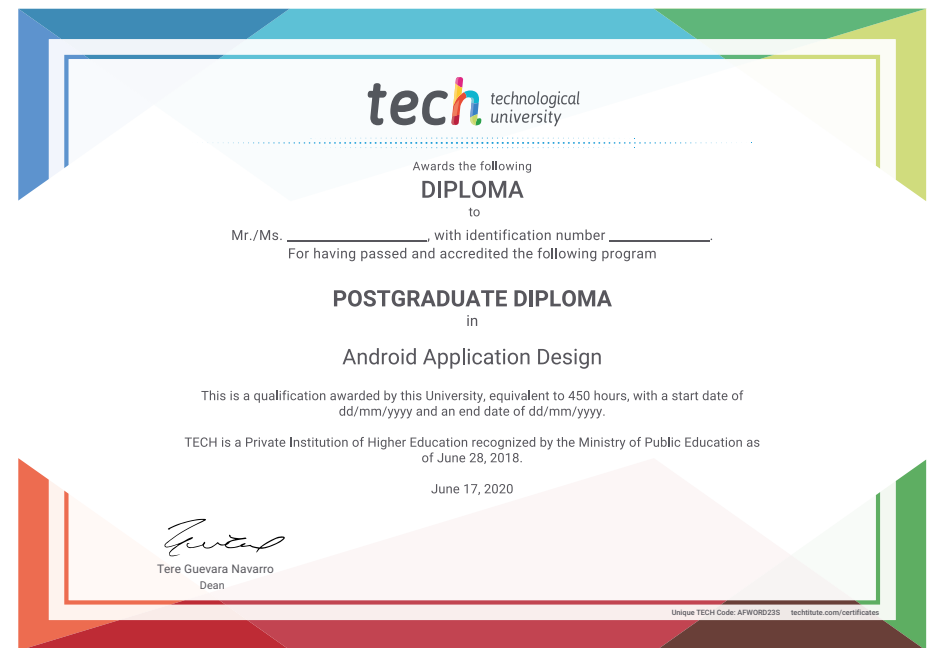
This **Postgraduate Diploma in Android Application Design** contains the most complete and up-to-date program on the market.

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 Android Application Design**

Official N° 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

Android Application Design

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.

tech
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