

Postgraduate Diploma Salesforce Programming



Postgraduate Diploma Salesforce Programming

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-salesforce-programming

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01

Introduction

By leveraging the Salesforce platform, developers can create custom applications and solutions specific to their customers' unique needs. This enables greater business agility, as organizations can quickly adapt their systems as market demands evolve. In addition, Salesforce programming provides the opportunity to integrate data and business processes into a single ecosystem, facilitating informed decision making and optimized workflows. In this context, TECH has designed a comprehensive 100% online program, tailored to the individual needs of the graduates, as its contents will be accessible anywhere and anytime. In addition, it is based on the revolutionary Relearning methodology.



“

With this 100% online Postgraduate Diploma, you will delve into the fundamental concepts and best practices of Salesforce development, creating customized and efficient solutions for any company"

Salesforce programming facilitates the customization and adaptation of the platform to the specific needs of each business, maximizing its usefulness and efficiency. In addition, by developing applications and automating processes through Salesforce, organizations can improve the productivity of their teams and streamline key operations, leading to greater operational efficiency and market competitiveness.

This is how this Postgraduate Diploma was conceived, through which the computer scientist will be equipped with the necessary skills to develop effective solutions on the Salesforce platform. Therefore, professionals will focus on APEX programming for Salesforce, mastering the development tools in APEX, evaluating the differences with Java and exploring the possibilities of accessing data from this language.

We will also delve into the different UI development frameworks available on the platform. In fact, event management and communication between custom components will be analyzed, as well as the tools dedicated to guarantee the quality of the developed code. The frameworks used for unit and end-to-end test generation will also be examined, providing a comprehensive view of how to ensure the quality and functionality of applications.

Finally, different Trigger frameworks will be evaluated, designing a detailed error management mechanism and examining SOLID principles to create efficient, robust and scalable software. In addition, you will explore the Apex Enterprise Patterns, fundamental to organize Apex code in a way that ensures the maintainability, scalability and long-term robustness of applications developed in Salesforce.

A 100% online Postgraduate Diploma that provides students with the ease of being able to study it comfortably, wherever and whenever they want. You will only need an electronic device with an Internet connection to safely advance in your career.

To this we must add the use of the Relearning methodology.

This **Postgraduate Diploma in Salesforce Programming** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of practical cases presented by experts in Salesforce Programming
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and 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 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



Salesforce programming will provide an accessible path for those who want to get into world-class enterprise application development. What are you waiting for to enroll?"

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You'll examine SOLID principles for creating effective, robust and scalable software, and generate specialized knowledge in Apex Enterprise Patterns. With all the quality that TECH is known for!"

The program's teaching staff includes professionals from the sector who contribute their work experience to this 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 education 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 during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will master the development tools in Apex, exploring the differences with Java and understanding the unique features that distinguish Apex, through an extensive library of multimedia resources.

You will explore event management and communication between custom components, as well as tools dedicated to ensuring the quality of developed code and frameworks.



02 Objectives

The objective of this Postgraduate Diploma will be to equip IT professionals with the technical skills and knowledge to develop advanced solutions on the Salesforce platform. Through a practical and theoretical approach, professionals will master the different aspects of Salesforce programming, from development in Apex, to user interface programming and the implementation of advanced error handling and code optimization techniques. In addition, graduates will be specialized in the design and implementation of scalable, robust and efficient solutions that respond effectively to the needs of companies.



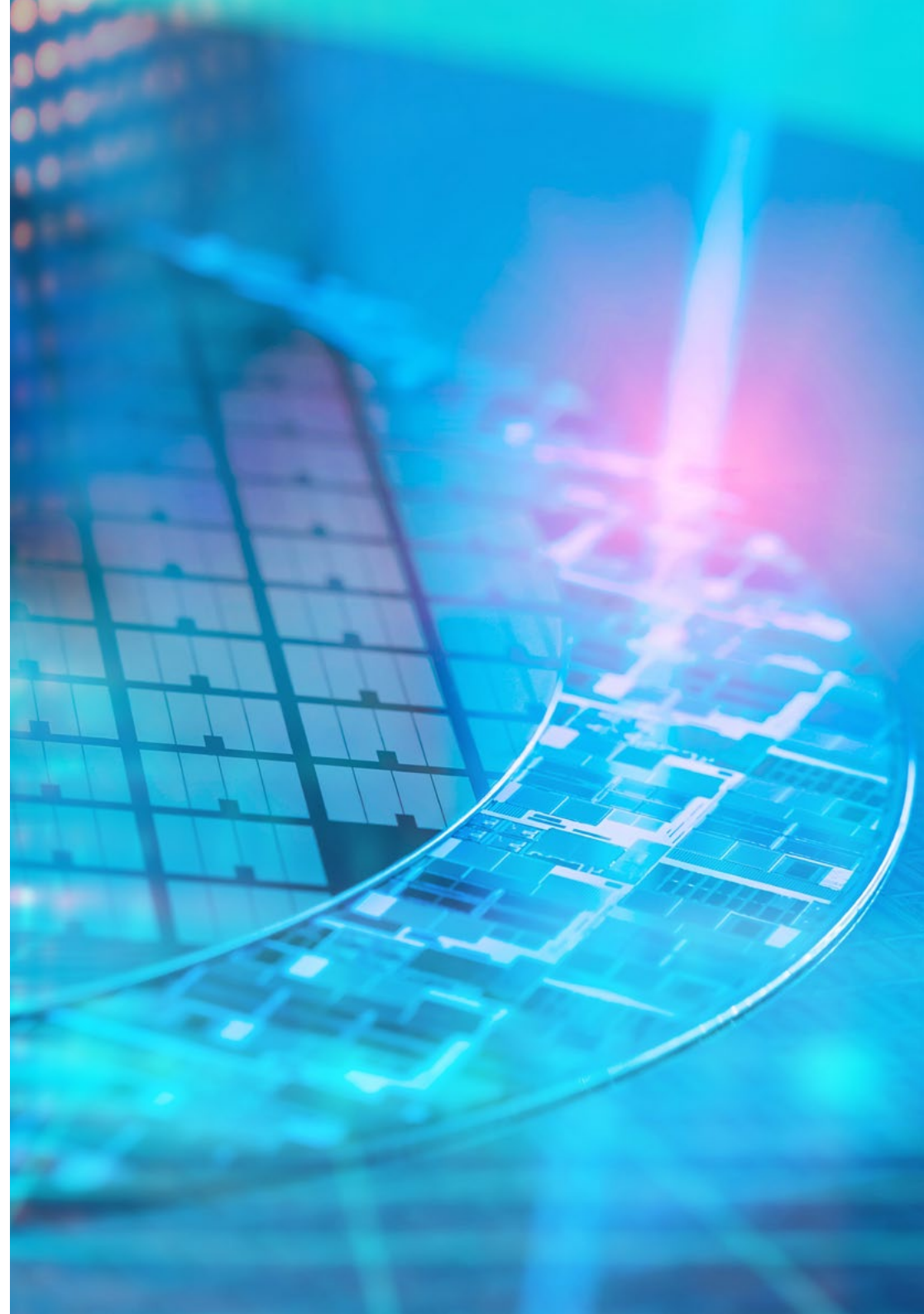


The main objective of this academic program will be based on specializing highly skilled and competitive professionals in the development of applications and solutions on the Salesforce platform"



General Objectives

- ♦ Lay the foundation for the most advanced concepts focused on programming on the Salesforce platform
- ♦ Establish the Salesforce ecosystem as a development platform and determine the relevant boundaries
- ♦ Generate specialized knowledge of how the metadata-driven development model used on the Salesforce platform works
- ♦ Analyze how Salesforce works with data and multitenant architecture
- ♦ Develop Salesforce database fundamentals
- ♦ Analyze all the tools and advanced options for creating objects in Salesforce
- ♦ Promote the correct use of APIs and data manipulation tools
- ♦ Identify the key tools and resources for programming in Apex
- ♦ Introduce testing tools to ensure the proper functioning of developed components
- ♦ Promote the use of good development practices aligned with the standards defined by Salesforce





Specific Objectives

Module 1. Programming in APEX for Salesforce

- ♦ Master Apex development tools
- ♦ Evaluate the differences between Java and Apex, delving into the features that distinguish Apex
- ♦ Analyze the possibilities of accessing data from Apex
- ♦ Develop synchronous and asynchronous processes, understanding their limitations and applying best practices

Module 2. UI Programming in Salesforce

- ♦ Delve into the various user interface (UI) development frameworks available in Salesforce
- ♦ Delve into event management and how custom components communicate within the application
- ♦ Identify the various tools dedicated to ensuring the quality of the developed code
- ♦ Explore the different frameworks used for unit and end-to-end test generation

Module 3. Advanced Programming in Salesforce

- ♦ Evaluate different Trigger Frameworks with emphasis on the characteristics of each one and the benefits they provide
- ♦ Design an error handling mechanism, in which any uncontrolled error that occurs during the execution of the application's custom code is recorded in detail
- ♦ Examine the SOLID principles that enable the creation of efficient, robust and scalable software
- ♦ Generate expertise in Apex Enterprise Patterns that define how to organize Apex code to ensure maintainability, scalability and robustness



Thanks to this Postgraduate Diploma, you will boost your success in the labor market and contribute to the growth and technological innovation of any company in which you work"

03

Course Management

The teaching team of this university program is made up of highly qualified and experienced professionals in technology and development on the Salesforce platform. These professionals have been carefully selected for their practical experience, their in-depth knowledge in the area and their extensive experience in the development of Salesforce solutions, as well as in teaching and training professionals in this field. As such, their pedagogical approach will be characterized by a combination of theory and practice, offering graduates a complete understanding of the concepts and skills needed to excel in the field of Salesforce Programming.





“

The Postgraduate Diploma faculty are leaders in their field and play a key role in preparing competent and successful professionals in developing solutions on the Salesforce platform”

Management



Mr. Tovar Barranco, Iosu Igor

- ♦ Chief Architect at NTT Data Group
- ♦ Software Architect at Beesion Technologies
- ♦ Systems Administrator at Araldi
- ♦ .NET Developer at Gabinete de Gestión
- ♦ JAVA Programmer and J2EE Application Developer
- ♦ Senior Technician in Computer Applications Development at Centro de Estudios AEG
- ♦ Specialized in SOA Architectures
- ♦ Various Salesforce certifications

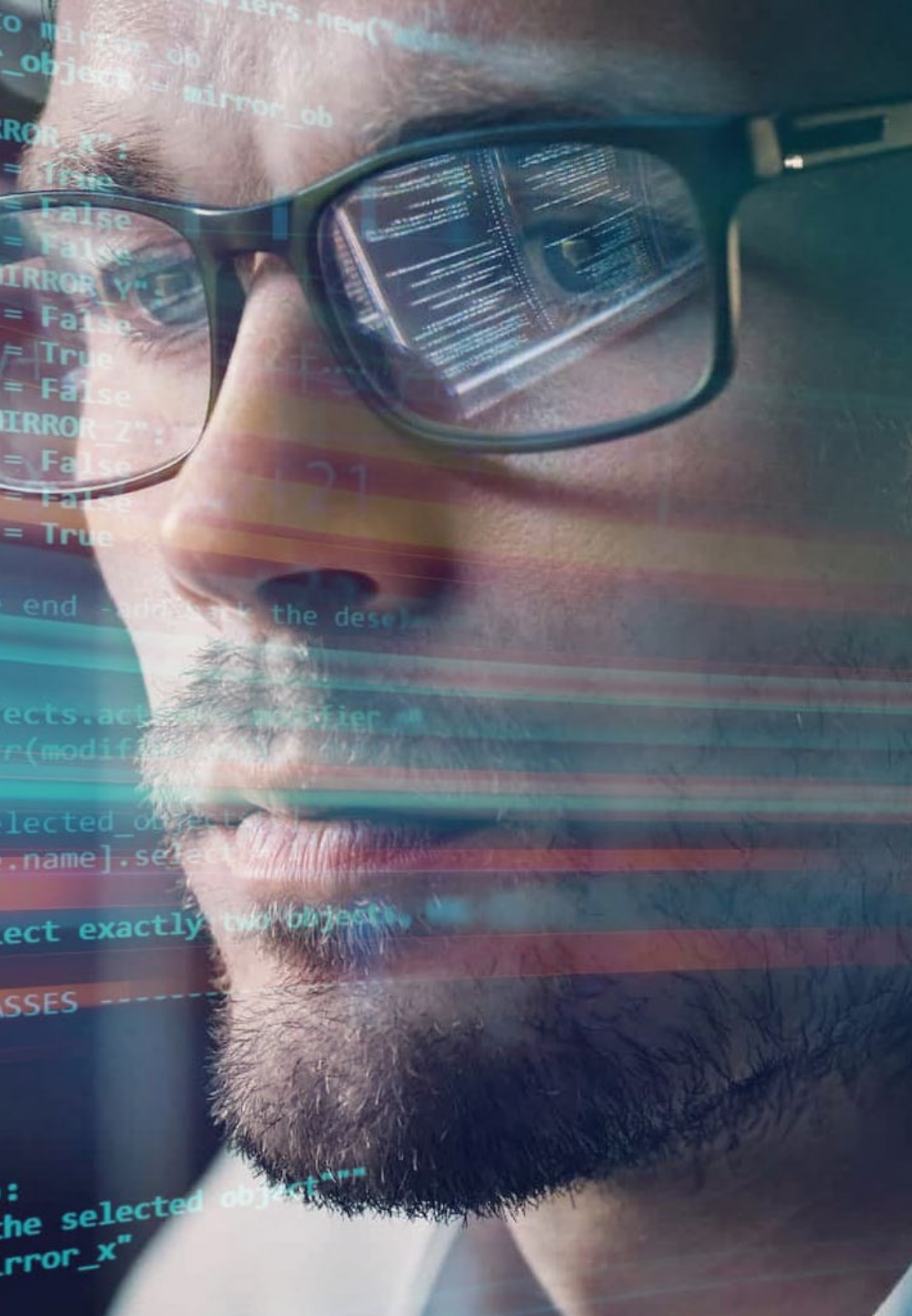
Professors

Mr. Latino Maradiaga, Mario Alfonso

- ♦ Expert Architect in the Infrastructure Sector
- ♦ Salesforce Expert Architect in Private Security Company
- ♦ Salesforce Lead Architect in the Brewing Industry
- ♦ Salesforce Architect in the Mining and Energy Sector
- ♦ Salesforce Engineer in the Agrochemical Industry
- ♦ Salesforce Engineer in the Healthcare and Pharmaceutical Distribution Sector
- ♦ Certification in: Program with PL/SQL, Salesforce Service Cloud Consultant, Salesforce App Builder,, Salesforce Advanced Administrator

Ms. Latino Guido, Katherine Elisa

- ♦ Systems Administrator
- ♦ Troubleshooting with Computer Systems in Online Teaching Company
- ♦ Higher Degree Development of Multiplatform Applications by CPIFP Los Enlaces
- ♦ Medium Degree in Microcomputer Systems and Networks



Mr. Santos Arias, Millán

- ◆ Chief Technical Architect - COE Salesforce at NTT Data
- ◆ Chief Salesforce Architect - COE Salesforce at Everis Spain, S.L.U.
- ◆ Senior Analyst at Everis Spain, S.L.U.
- ◆ Salesforce Certified Administrator
- ◆ Salesforce Certified Platform App Builder
- ◆ Salesforce Certified Platform Developer I
- ◆ Salesforce Certified Sharing and Visibility Architect
- ◆ Salesforce Certified Data Architecture and Management Designer
- ◆ Salesforce Certified Development Lifecycle and Deployment Architect
- ◆ Salesforce Certified Identity and Access Management Architect
- ◆ Salesforce Certified Integration Architect
- ◆ Salesforce Certified System Architect
- ◆ Salesforce Certified Application Architect
- ◆ Salesforce Certified Experience Cloud Consultant
- ◆ Graduate in Computer Engineering from the University of Granada

04

Structure and Content

The Postgraduate Diploma in Salesforce Programming will provide comprehensive coverage of the fundamentals and advanced techniques needed to develop effective solutions on this platform. Therefore, through a modular structure, computer scientists will explore topics ranging from programming in Apex, including the evaluation of differences with Java and the development of synchronous and asynchronous processes, to the programming of user interfaces, delving into event management and the implementation of unit and end-to-end tests.



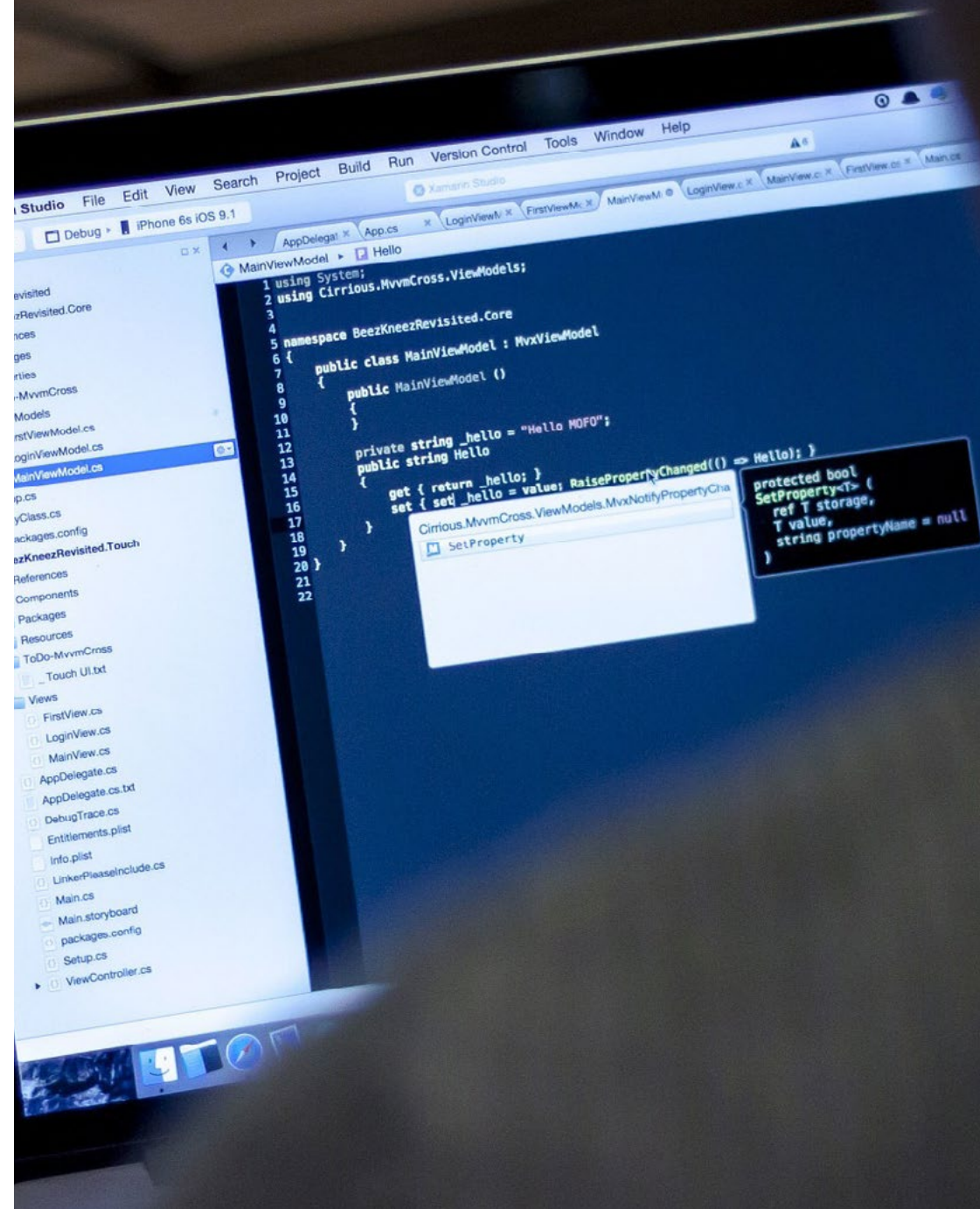


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You will cover advanced aspects, such as the design of detailed error handling mechanisms, the evaluation of Trigger frameworks and the application of SOLID principles”

Module 1. Programming in APEX for Salesforce

- 1.1. Development Tools
 - 1.1.1. Developer Console
 - 1.1.2. Recommended IDE for Apex Programming
 - 1.1.3. Salesforce Extensions for VS Code
 - 1.1.4. Code Builder
- 1.2. Programming with Apex
 - 1.2.1. Apex Programming
 - 1.2.2. Apex Transaction, Methods and Static Variables
 - 1.2.3. Management of Exceptions in Apex
- 1.3. Data Access from Apex
 - 1.3.1. SOQL Structures and Fundamentals in Apex
 - 1.3.2. Apex Variables in SOQL and SOSL
 - 1.3.3. DML Statements vs. Methods of the System Database Class
- 1.4. Apex Triggers
 - 1.4.1. Triggers and Execution Order
 - 1.4.2. Context Variables
 - 1.4.3. Bulk Triggers and Best Practices
- 1.5. Asynchronous Apex
 - 1.5.1. Future Apex
 - 1.5.2. Queueable Apex and Execution Chaining
 - 1.5.3. Apex Scheduler
- 1.6. Batch Apex
 - 1.6.1. Batch Apex Architecture
 - 1.6.2. Batch Jobs
 - 1.6.3. Batch Apex Limitations
- 1.7. Apex Security
 - 1.7.1. Apex Applications: Security Methods
 - 1.7.2. Digital Experience: Methods for Websites
 - 1.7.3. Crypto Layer of Apex
- 1.8. Record Sharing Using Apex
 - 1.8.1. Sharing Managed by Apex
 - 1.8.2. Recalculation of Sharing with Apex
 - 1.8.3. Assignment of Territories to Opportunities



- 1.9. Apex Callouts
 - 1.9.1. SOAP Service: Proxy Classes Generated Using WSDL
 - 1.9.2. HTTP Calls: HTTP Class Methods
 - 1.9.3. Limitations of Apex Callouts
- 1.10. Execution of Unit Tests
 - 1.10.1. Unit Test Execution Patterns
 - 1.10.2. Test Data Isolation
 - 1.10.3. Simulated and Auxiliary Objects: System.StubProvider Interface
 - 1.10.4. Best Practices in the Development of Test Classes

Module 2. UI Programming in Salesforce

- 2.1. VisualForce
 - 2.1.1. VF Page Creation and Most Common Tags
 - 2.1.2. Standard Controller and Standard List Controller
 - 2.1.3. Custom Controller
 - 2.1.4. Error Handling
 - 2.1.5. Best Practices
- 2.2. Aura Component
 - 2.2.1. Creating Aura Components and Tags
 - 2.2.2. Lightning Data Service
 - 2.2.3. Communication with Apex Server
 - 2.2.4. Composition and Communication between Components
 - 2.2.5. Error Handling
 - 2.2.6. Best Practices
- 2.3. Lightning Web Components
 - 2.3.1. LWC Creation and Most Common Tags
 - 2.3.2. Event Management and Lifecycle Hooks
 - 2.3.3. Communication with Apex Server
 - 2.3.4. Page Composition and Communication between Components
 - 2.3.5. Shadow DOM
 - 2.3.6. Use of Cell Phone Capabilities
 - 2.3.7. Error Handling and Debugging
 - 2.3.8. Best Practices
- 2.4. Lightning Message Service
 - 2.4.1. Message Channel Creation and Scope Configuration
 - 2.4.2. Publishing a Message in a Message Channel
 - 2.4.3. Subscription to a Message Channel
 - 2.4.5. Limitations
- 2.5. UI Frameworks Coexistence
 - 2.5.1. Visualforce - Aura Component Interoperability
 - 2.5.2. Visualforce - LWC Interaoperability
 - 2.5.3. LWC - Aura Component Interoperability
- 2.6. Lightning Design System
 - 2.6.1. Platforms
 - 2.6.2. Lightning Design System
 - 2.6.3. Best Practices
- 2.7. UI Testing
 - 2.7.1. Jasmine
 - 2.7.2. Jest
 - 2.7.3. UTAM
 - 2.7.4. Selenium
- 2.8. Code Quality
 - 2.8.1. Settings
 - 2.8.2. Linter
 - 2.8.3. RetireJS
- 2.9. Troubleshooting
 - 2.9.1. Chrome Developer Console
 - 2.9.2. Identify Performance Issues
 - 2.9.3. Identify Networks Issues
- 2.10. Mobile SDK
 - 2.10.1. Development Modes
 - 2.10.2. Hybrid Application Development
 - 2.10.3. Native Application Development (Android)

Module 3. Advanced Programming in Salesforce

- 3.1. Dynamic Apex
 - 3.1.1. Dynamic Access to Object and Field Definitions
 - 3.1.2. Dynamic SOQL
 - 3.1.3. Dynamic DML
- 3.2. Platform Cache
 - 3.2.1. Platform Cache. Uses
 - 3.2.2. Org Cache
 - 3.2.3. Session Cache
 - 3.2.4. Best Practices
- 3.3. Platform Event Bus
 - 3.3.1. Platform Event Bus. Uses
 - 3.3.2. Publication of an Event
 - 3.3.3. Subscription to an Event
- 3.4. SOLID Principles
 - 3.4.1. Single Responsibility
 - 3.4.2. Open-closed
 - 3.4.3. Liskov Substitution
 - 3.4.4. Interface Segregation
 - 3.4.5. Dependency Inversion
- 3.5. Apex Enterprise Pattern
 - 3.5.1. Separation of Concerns (SOC)
 - 3.5.2. Selector Layer
 - 3.5.3. Domain Layer
 - 3.5.4. Service Layer
- 3.6. Trigger Framework
 - 3.6.1. Trigger Framework
 - 3.6.2. O'Hara
 - 3.6.3. Dan Appleman
 - 3.6.4. Hari Krishnan
 - 3.6.5. Scot Wells



- 3.7. Error Framework
 - 3.7.1. Error Framework
 - 3.7.2. Error Capture
 - 3.7.3. Platform Event to Register the Error
- 3.8. Framework Automations
 - 3.8.1. Automation Tools
 - 3.8.2. Design of Automation Framework
 - 3.8.3. Technical Aspects
- 3.9. Development Tools
 - 3.9.1. Code Analyzer
 - 3.9.2. Apex Replay
 - 3.9.3. Apex Log Analyzer
 - 3.9.4. Explain Plan
- 3.10. Troubleshooting Limits in Apex
 - 3.10.1. CPU Time
 - 3.10.2. Too Many SOQL
 - 3.10.3. Heap Size

“ *This Postgraduate Diploma will provide you with comprehensive and specialized training in Salesforce programming, preparing you to meet the challenges of development on this market-leading platform*”

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.



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.

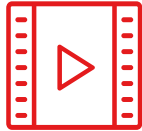
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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 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.



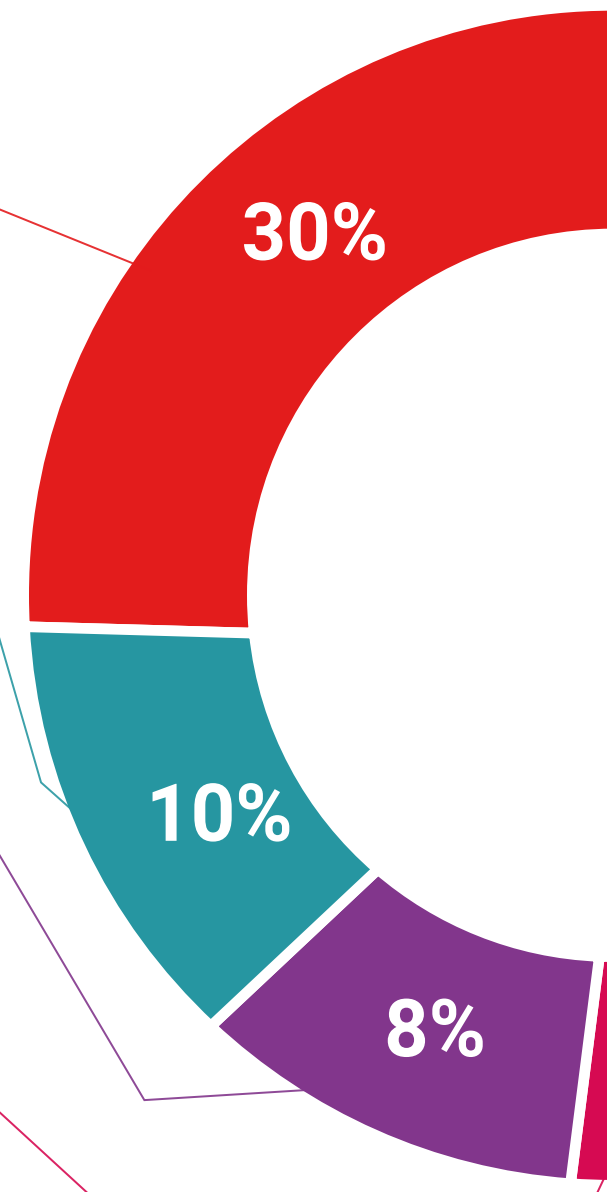
Practising Skills and Abilities

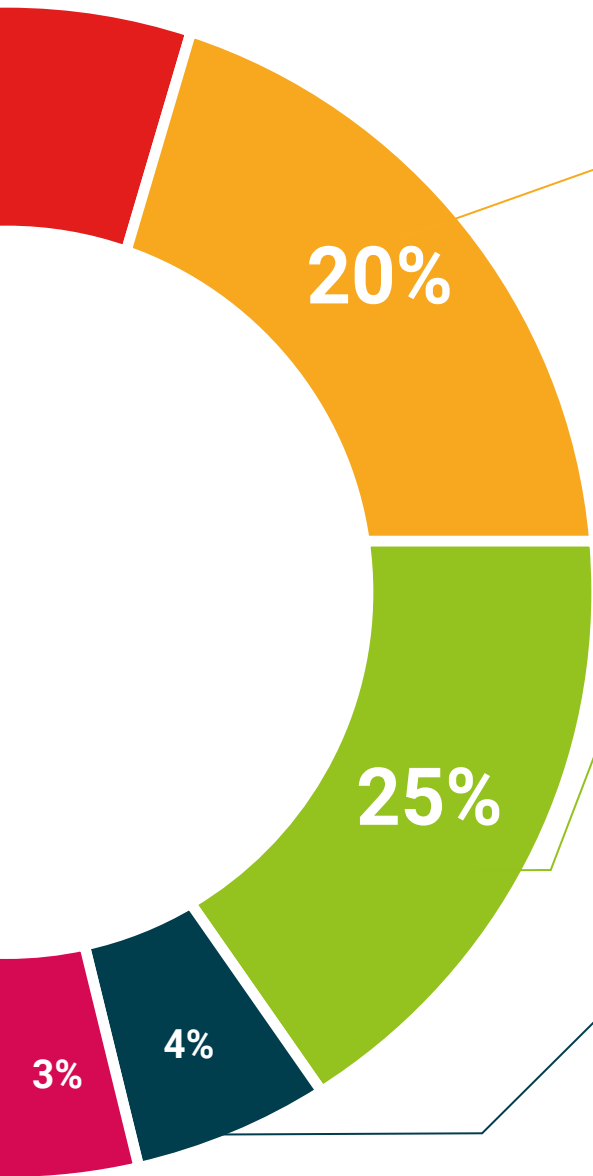
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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 Diploma in Salesforce Programming guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 a **Postgraduate Diploma in Salesforce Programming** 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 Diploma in Salesforce Programming**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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
virtual classroom



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