

# Postgraduate Certificate

## User Interface Components in Salesforce





## Postgraduate Certificate User Interface Components in Salesforce

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/user-interface-components-salesforce](http://www.techtute.com/us/information-technology/postgraduate-certificate/user-interface-components-salesforce)

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# 01

# Introduction

User Interface Components in Salesforce play a crucial role in creating effective applications for businesses. These elements provide a wide range of capabilities for organizations to tailor their applications to fit their unique business processes and workflow requirements. They also enable entities to visualize critical data in a concise way, through resources such as dashboards, interactive graphs or charts. In this way, they facilitate informed decision making based on accurate data. Given its advantages, TECH is developing a university program that will focus on the creation of the most common VF page and Tags. In addition, the program is delivered in a convenient 100% online mode.



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*This Postgraduate Certificate, based on Relearning, will provide you with advanced skills to design User Interfaces that adapt to different devices and screen sizes”*

The Mobile SDK gives developers the opportunity to create native mobile apps for iOS and Android devices that leverage Salesforce functionality. This tool provides secure authentication mechanisms to allow users to access mobile apps using their credentials. In addition, such a tool greatly facilitates data synchronization between mobile apps and Salesforce, making it possible for consumers to access information in real time even when they are disconnected from the Internet.

Given its importance, TECH is launching a pioneering Postgraduate Certificate in User Interface Components in Salesforce. The academic itinerary will delve into the specificities of the Custom Controller, to define the customized business logic behind a Visualforce page. In turn, the syllabus will analyze the process of Communication with the Apex Server in order for the student to interact with external data and systems. Related to this, the course materials will delve into the Troubleshooting process, which will enable graduates to troubleshoot technical problems that may arise in applications running on Salesforce. The program will also examine in detail the Aura Components for developers to create dynamic and highly customized User Interfaces for different devices.

Regarding the methodology of this university program, it should be noted that it reinforces its innovative character. TECH provides students with a 100% online educational environment, thus adapting to the needs of busy professionals who want to advance their careers. It also uses the Relearning teaching system, based on the repetition of key concepts to fix knowledge and facilitate learning. In this way, the combination of flexibility and a robust pedagogical approach makes the program highly accessible. The only requirement is that students have an electronic device with Internet access at their fingertips to access the Virtual Campus and enjoy the most dynamic educational materials on the market.

This **Postgraduate Certificate in User Interface Components in Salesforce** contains the most complete and up-to-date educational program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Salesforce Programming
- ♦ The graphic, schematic and practical contents with which it is conceived provide complete and practical information on those 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



*A cutting-edge program that will allow you to advance progressively and completely, from the comfort of your own home”*

“

*You will delve into the Troubleshooting process to diagnose and resolve technical issues that may arise in the Salesforce platform”*

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 prepare for 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 course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will perform UI Testing to validate that the User Interfaces work as expected.*

*Study at your own pace, with the convenience offered by TECH's online mode.*



# 02

# Objectives

Upon completion of this course, computer scientists will master the main Salesforce development technologies, including Visualforce, to create User Interface components. They will also implement cutting-edge strategies to optimize the performance of user environments, including optimizing page load time and reducing resource usage. In this sense, graduates will develop customized business applications that address the specific needs of organizations and improve user productivity.







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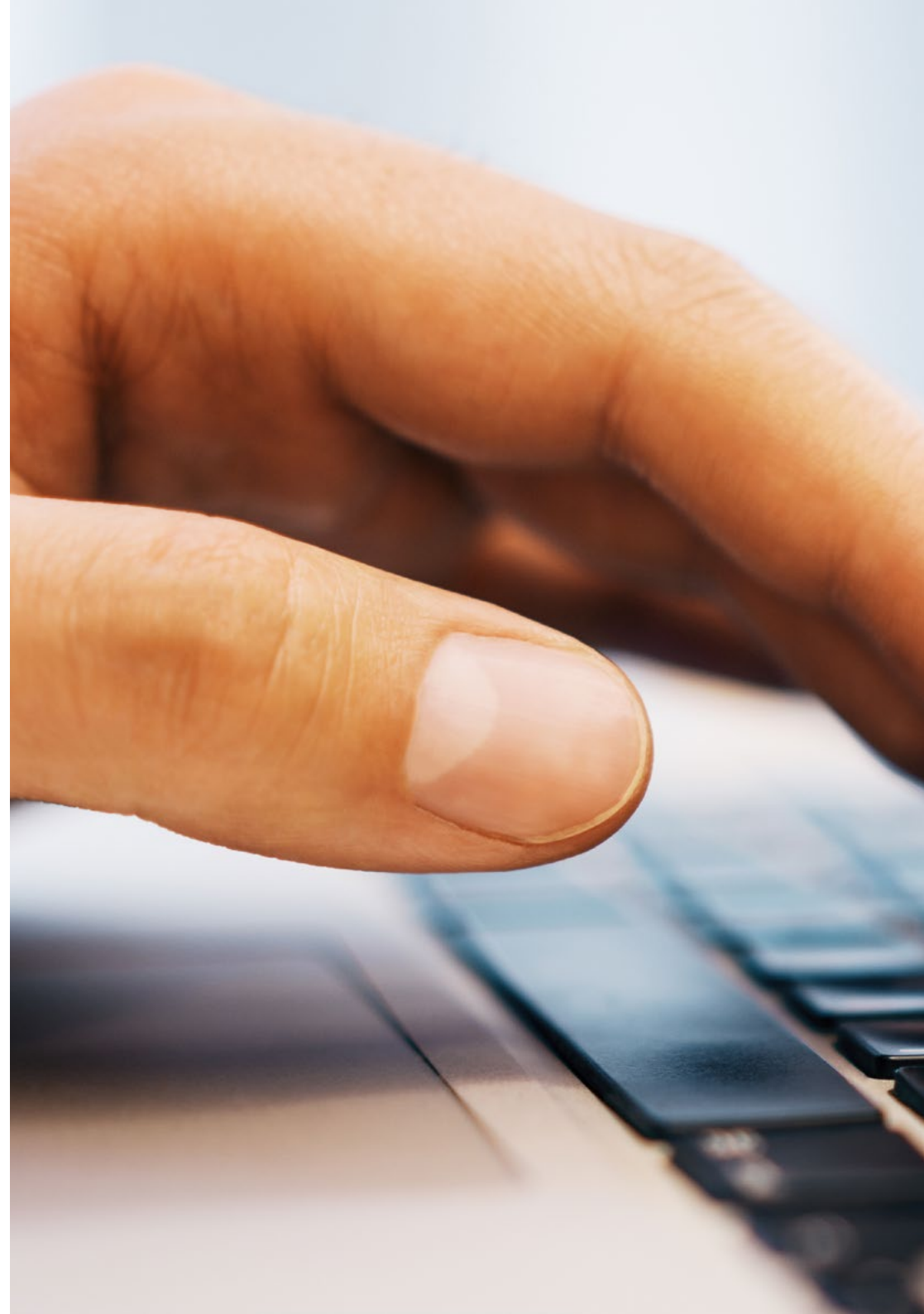
*You will nurture your daily practice with the latest techniques to optimize the performance of user interfaces in Salesforce”*



## General Objectives

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- ◆ Develop customized and sophisticated pages for desktop and mobile applications to meet customer needs
- ◆ Introduce testing tools to ensure the proper functioning of the developed components
- ◆ Justify why it is necessary to use code quality tools and the benefits of using them
- ◆ Promote the use of good development practices aligned with Salesforce-defined standards





## Specific Objectives

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



*You will develop skills to create custom web pages using sophisticated technologies such as Visualforce or Lightning Web Components”*

03

# Course Management

To ensure a high quality teaching, TECH brings together in this Postgraduate Certificate to references in the field of User Interface Components in Salesforce. These professionals will be responsible for transmitting to the students both their knowledge and work experience in this field. In addition, the experts will provide the computer scientists with personalized guidance and support, which will ensure the success of their learning process. In this sense, they will include in the teaching content the latest advances in this field to meet the needs of the market.



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*The teaching team has designed hours of additional content for you to extend all the sections of the syllabus in an individualized way”*

## 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 certifications in Salesforce

## Professors

### Mr. Santos Arias, Millán

- ♦ Chief Technical Architect - CoE Salesforce in NTT Data
- ♦ Salesforce Lead Architect - CoE Salesforce en 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
- ♦ Degree in Computer Engineering from the University of Granada

### Ms. Godoy Rodríguez, Tania

- ♦ Architect at Salesforce Center of Excellence
- ♦ Salesforce Certified Administrator
- ♦ Salesforce Certified Platform App Builder
- ♦ Salesforce Certified Platform Developer I
- ♦ Salesforce Certified Sales Cloud Consultant
- ♦ Salesforce Certified Sharing and Visibility Designer
- ♦ Salesforce Certified OmniStudio Developer
- ♦ Salesforce Certified OmniStudio Consultant
- ♦ Salesforce Certified Industries CPQ Developer
- ♦ Salesforce Certified Net Zero Cloud Accredited Professional
- ♦ Specialization in Telecommunication Systems from the University of Malaga
- ♦ Master's Degree in Telecommunication Engineering from the University Carlos III
- ♦ Technical Telecommunication Engineer from the University of Malaga



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

## Structure and Content

This university program will focus on the capabilities offered by Salesforce in terms of User Interface development. The curriculum will delve into how Visualforce works to create custom pages and web components. In addition, the curriculum will delve into the Lightning Message Service to enable graduates to facilitate communication between the various elements that make up the User Interface. The teaching materials will also provide computer scientists with good practices to create attractive and functional pages, which will have a significant impact on the projects implemented in the working world.



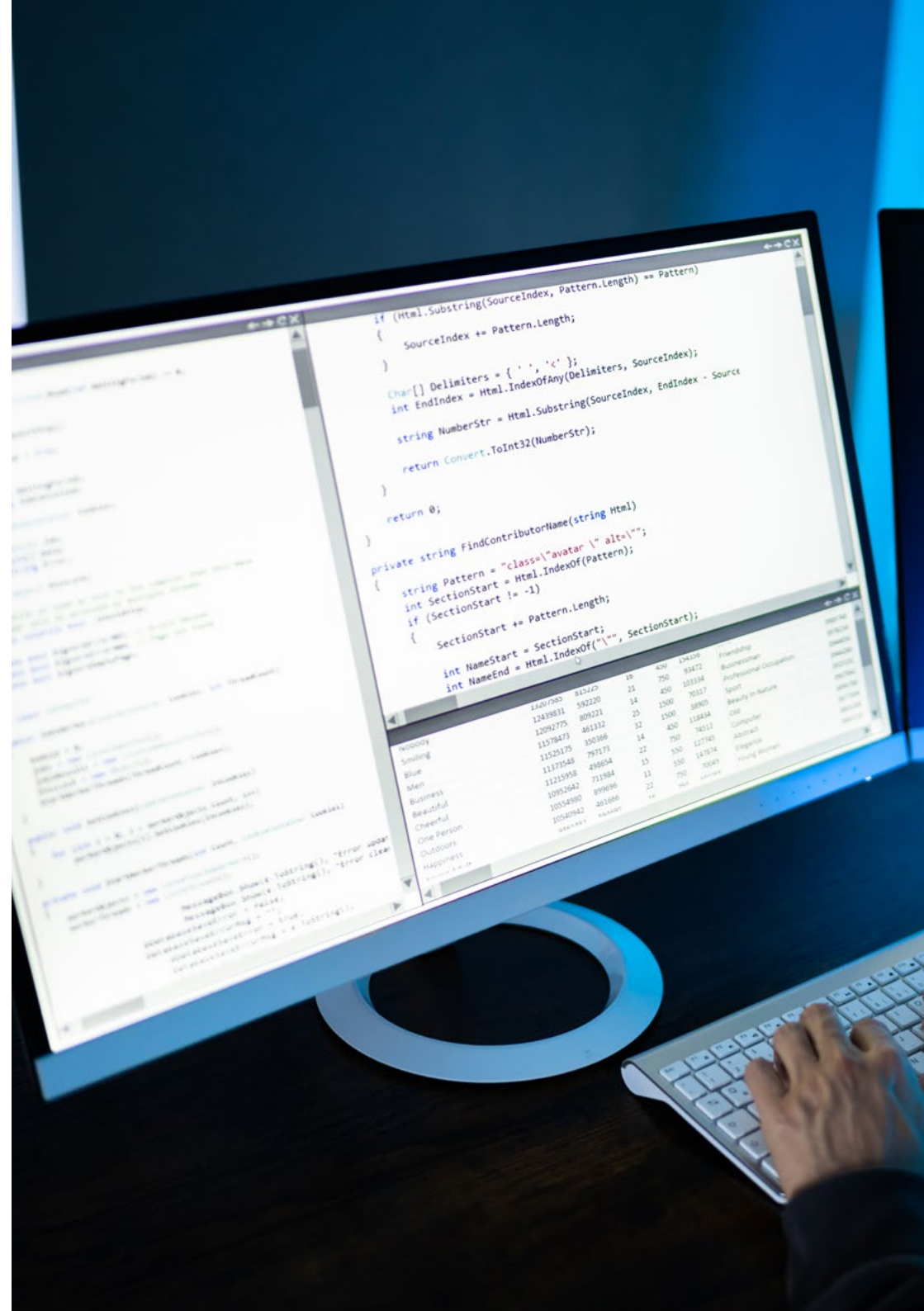


“

*You will use Aura Components to build interactive and dynamic web applications on the Salesforce platform”*

## Module 1. User Interface Programming in Salesforce

- 1.1. VisualForce
  - 1.1.1. VF Page Creation and Most Common Tags
  - 1.1.2. Standard Controller and Standard List Controller
  - 1.1.3. Custom Controller
  - 1.1.4. Error Handling
  - 1.1.5. Best Practices
- 1.2. Aura Component
  - 1.2.1. Creating Aura Components and Tags
  - 1.2.2. Lightning Data Service
  - 1.2.3. Communication with Apex Server
  - 1.2.4. Composition and Communication between Components
  - 1.2.5. Error Handling
  - 1.2.6. Best Practices
- 1.3. Lightning Web Components
  - 1.3.1. LWC Creation and Most Common Tags
  - 1.3.2. Event Management and Lifecycle Hooks
  - 1.3.3. Communication with Apex Server
  - 1.3.4. Composition of Pages and Communication between Components
  - 1.3.5. Shadow DOM
  - 1.3.6. Use of Cell Phone Capabilities
  - 1.3.7. Error Handling and Debugging
  - 1.3.8. Best Practices
- 1.4. Lightning Message Service
  - 1.4.1. Message Channel Creation and Scope Configuration
  - 1.4.2. Publishing a Message in a Message Channel
  - 1.4.3. Subscription to a Message Channel
  - 1.4.5. Limitations



- 1.5. UI Frameworks Coexistence
  - 1.5.1. Visualforce - Aura Component Interoperability
  - 1.5.2. Visualforce - LWC Interoperability
  - 1.5.3. LWC - Aura Component Interoperability
- 1.6. Lightning Design System
  - 1.6.1. Platforms
  - 1.6.2. Lightning Design System
  - 1.6.3. Best Practices
- 1.7. UI Testing
  - 1.7.1. Jasmine
  - 1.7.2. Jest
  - 1.7.3. UTAM
  - 1.7.4. Selenium
- 1.8. Code Quality
  - 1.8.1. Settings
  - 1.8.2. Linter
  - 1.8.3. RetireJS
- 1.9. Troubleshooting
  - 1.9.1. Chrome Developer Console
  - 1.9.2. Identify Performance Problems
  - 1.9.3. Identify Network Problems
- 1.10. Mobile SDK
  - 1.10.1. Development Modes
  - 1.10.2. Hybrid Application Development
  - 1.10.3. Native Application Development (Android)



*TECH's priority is to help you achieve academic and professional excellence. Enroll now!"*

# 05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



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

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.





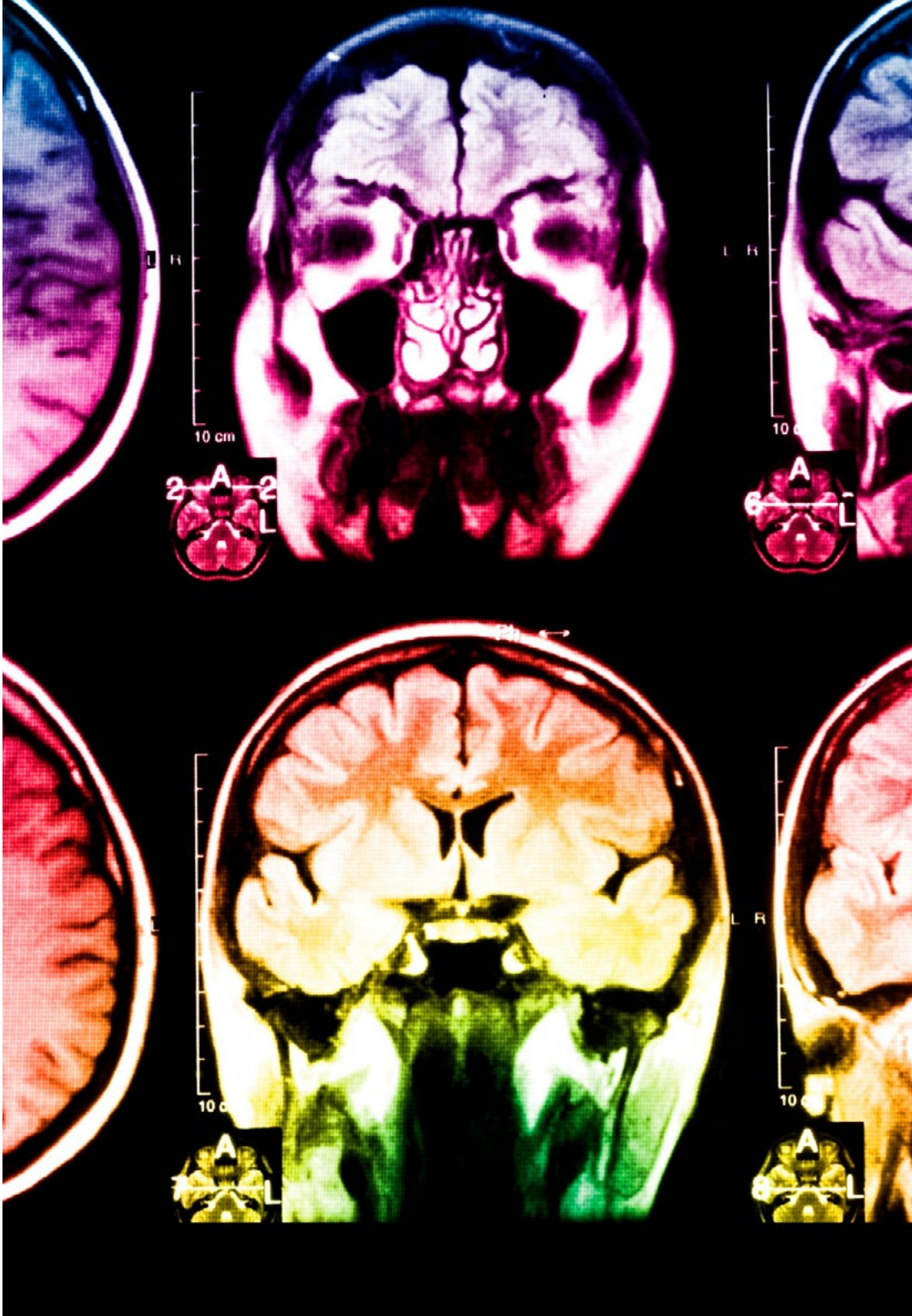
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



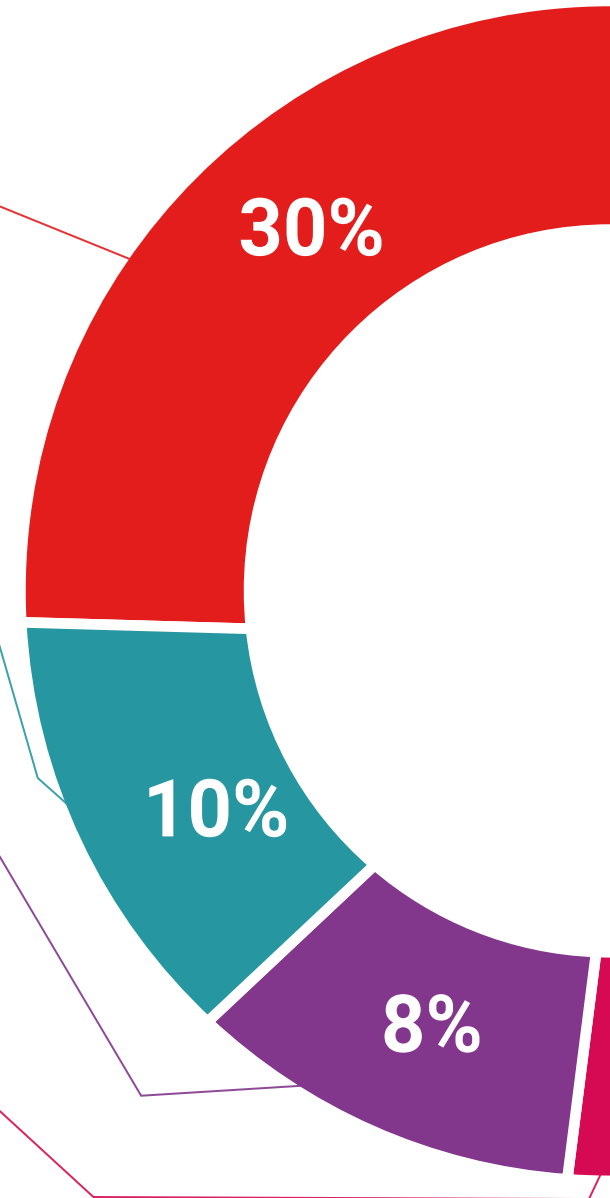
### Practising Skills and Abilities

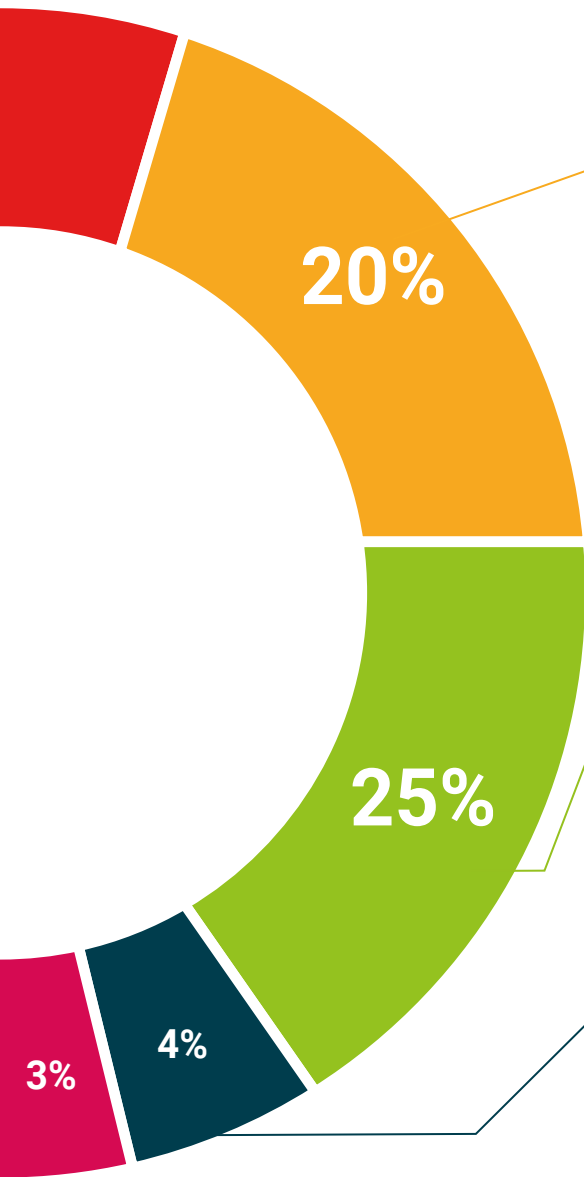
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 06 Certificate

The Postgraduate Certificate in User Interface Components in Salesforce guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 private qualification will allow you to obtain a **Postgraduate Certificate in User Interface Components in Salesforce** 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** private qualification, 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 Certificate in User Interface Components in Salesforce**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





## Postgraduate Certificate User Interface Components in Salesforce

- » Modality: online
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# Postgraduate Certificate

## User Interface Components in Salesforce

```
...on(e) {  
  ...  
  ...new line  
  ...ivate(true);  
  ... // this is a modified line  
  
  (e.keyCode == 13) {  
    e.stopImmediatePropagation();  
    e.preventDefault();  
    self.search();  
    self.deactivate();  
    return;  
  }  
  //up/down  
  if (e.keyCode == 38 || e.keyCode == 40) {  
    e.preventDefault();  
    e.stopImmediatePropagation();  
    if (e.keyCode == 38) { // up  
      // show previous search query  
      if (hist.currentIndex == hist.history.length) {  
        hist.currentQuery = input.value;  
        // skip previous search if we're already there  
        if (hist.currentQuery == hist.history[hist.history.length - 1]) {  
          hist.currentIndex--;  
        }  
      }  
    }  
  }  
}
```