

Postgraduate Certificate

Advanced Vue Front-End Development



Postgraduate Certificate Advanced Vue Front-End Development

- » 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/advanced-vue-front-end-development

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01

Introduction

Advanced Vue Front-End Development offers a wide range of benefits, which boost the efficiency and quality of web development. So, by leveraging the advanced features of this framework, developers can create highly interactive and responsive web applications with ease. In addition, its reusable component system and its ability to integrate seamlessly with other libraries and tools, such as Vuex and Vue Router, allow building robust and scalable applications. In this context, TECH has developed a comprehensive 100% online program, based on the innovative Relearning methodology, which facilitates learning and considerably reduces the long study sessions, characteristic of other types of programs more focused on memorization.



“

Thanks to this 100% online Postgraduate Certificate, you will immerse yourself in the implementation of the Composition API, the development of dynamic applications with Vue Router, advanced testing and performance optimization"

Advanced Vue Development in Front-End offers a number of significant benefits for developers and web applications. Indeed, by leveraging the framework's advanced features, developers can create highly interactive and efficient user interfaces, optimizing performance and user experience. Likewise, its component-based approach promotes code reuse and modularity, streamlining development and team collaboration.

This is how this Postgraduate Certificate was created, which will offer a deep dive into the critical aspects of web development with Vue. In this way, professionals will acquire specialized knowledge in key areas such as web security, performance optimization and internationalization. In addition, through the exploration of testing best practices, IT professionals will create secure, efficient and globally accessible Vue applications.

In addition, essential aspects such as the development of dynamic applications using Vue Router and advanced testing will be covered. In fact, experts will be able to secure Vue applications through sound coding practices and risk mitigation techniques. They will also delve into optimizing the performance of Vue applications, enabling developers to create fast and fluid user experiences.

In this way, this academic program will provide graduates with the skills and knowledge necessary to develop robust, secure and high-performing Vue applications. From implementing the Composition API, to optimizing performance and adopting Vue 3, comprehensive learning will be provided to meet the challenges of modern web development and create exceptional user experiences.

In this sense, TECH has implemented a 100% online and totally flexible academic program, to the point that students will only need an electronic device with an Internet connection to access the teaching materials.

At the same time, you will benefit from the revolutionary Relearning methodology, which consists of the reiteration of fundamental concepts for an optimal and organic assimilation of content.

This **Postgraduate Certificate in Advanced Vue Front-End Development** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Advanced Vue Front-End Development
- ♦ 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



With features such as dynamic routing, advanced form management, and integration with development tools, Vue front-end development will enable you to build modern, robust web applications"

“

You'll master advanced techniques for improving the performance of Vue applications, from efficient state management to implementing caching strategies"

The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

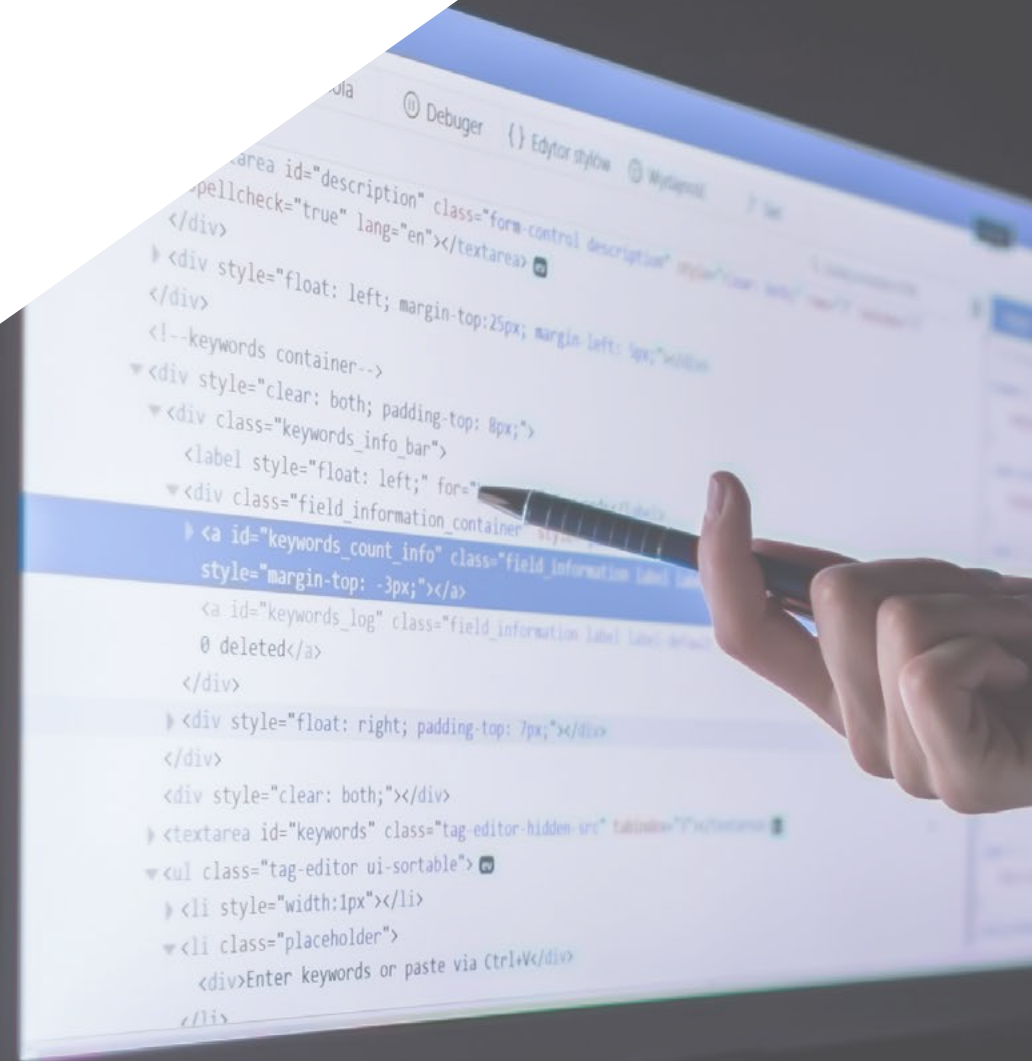
You will emphasize the implementation of the Composition API, taking full advantage of Vue's advanced capabilities for building dynamic and scalable applications. Enroll now!

You'll take a hands-on approach to Vue 3 and explore its enhanced features and capabilities, preparing you to take full advantage of the latest version of the framework in your future projects.



02 Objectives

The main objective of this university program is to provide professionals with a deep and specialized knowledge in the advanced development of web applications using the Vue framework. As such, computer scientists will be specialized in critical areas such as web security, performance optimization, internationalization and testing best practices. It will also familiarize graduates with the new features of Vue 3, including the Composition API, equipping them with the necessary skills to develop dynamic and scalable applications using Vue Router.



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The goal of this comprehensive Postgraduate Certificate is to become a highly skilled and versatile professional, capable of designing, implementing and securing advanced Vue applications"

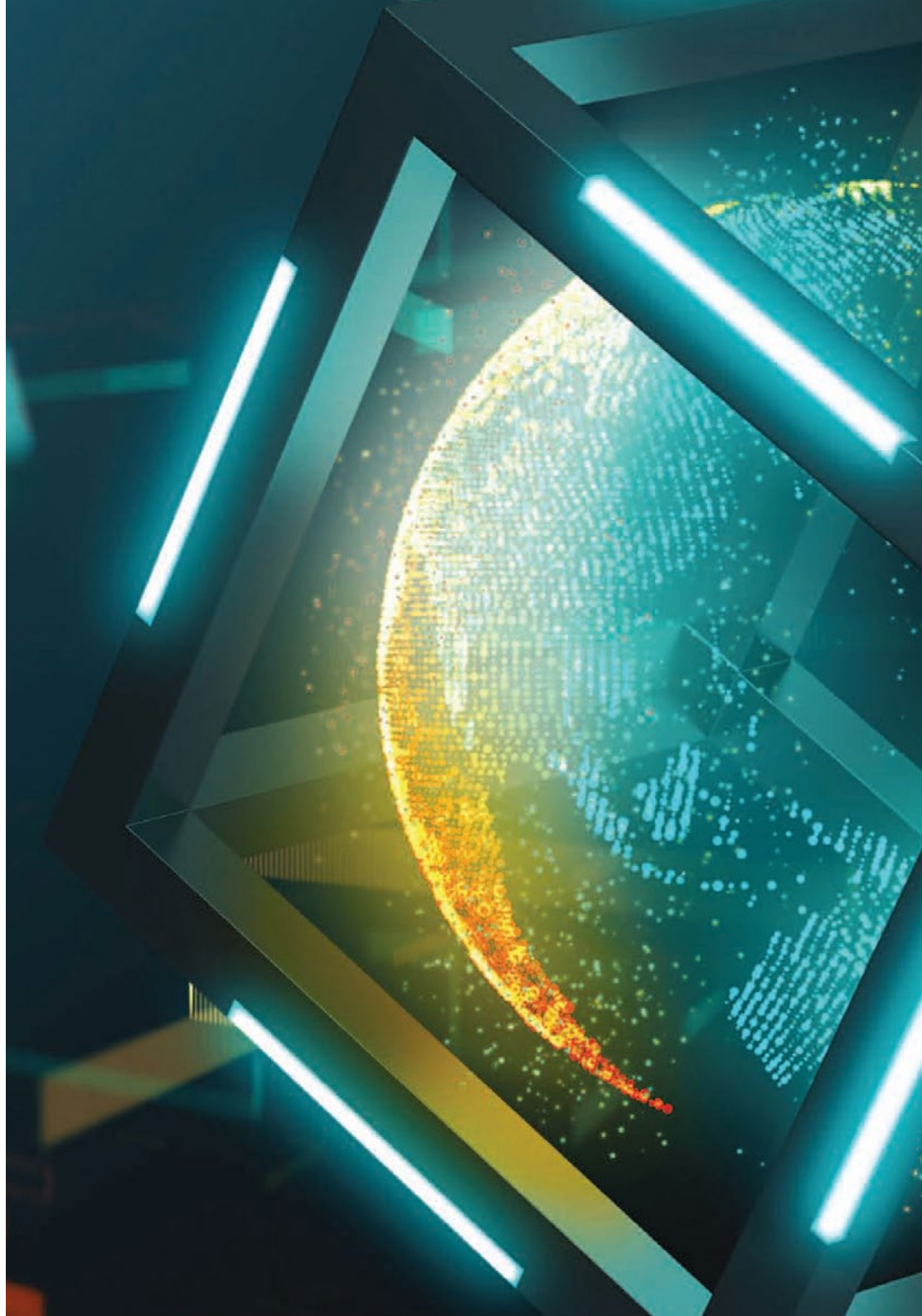


General Objective

- ◆ Develop specialized knowledge in web security, performance optimization, internationalization, and testing best practices to ensure the creation of secure, efficient, and globally accessible Vue applications



You will delve into web security, performance optimization, internationalization and testing best practices, ensuring the creation of secure, efficient and globally accessible Vue applications"





Specific Objectives

- ◆ Implement the Composition API in Vue applications
- ◆ Develop dynamic applications with Vue Router
- ◆ Perform advanced Vue testing
- ◆ Secure Vue applications
- ◆ Optimize the performance of Vue applications
- ◆ Adopt Vue 3 and explore its capabilities

03

Course Management

The instructors are highly qualified and experienced professionals in the field of web development, with extensive proficiency in the Vue framework. In fact, they have a solid understanding of the fundamentals of front-end development and are specialized in areas such as web security, performance optimization and testing best practices. In addition, their practical experience and theoretical knowledge will allow them to guide graduates through advanced Vue concepts, offering a dynamic and relevant knowledge that combines theory with practical applications.



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The faculty of this Postgraduate Certificate will be able to inspire and motivate you to reach your full potential in the development of advanced Vue applications. What are you waiting for to enroll?"

Management



Mr. Utrilla Utrilla, Rubén

- ♦ Technology Project Manager at Serquo
- ♦ Full-Stack Developer at ESSP
- ♦ Junior Full-stack Developer at Sinis Technology S.L.
- ♦ Junior Full-stack Developer at Escuela Politécnica Cantoblanco Campus
- ♦ Master in AI and Innovation by Founderz
- ♦ Degree in Computer Engineering from Universidad Autónoma de Madrid
- ♦ Google Cloud Developer course in Google Academic Program

Professors

Ms. Del Vado Puell, Andrea

- ♦ Web Developer at Serquo
- ♦ Web Developer at Ribera Salud
- ♦ Software Developer at FutuRS
- ♦ Master's Degree university in Web Services and Applications Development from the International University of Valencia
- ♦ Degree in Computer Engineering from Universidad Complutense de Madrid
- ♦ Full Stack Developer MEAN Bootcamp at GeeksHubs Academy
- ♦ Full Stack Developer MEAN Certification



```
1010  
010111  
010111  
101011  
101001
```

```
... -add back the deleted  
...  
... objects.active = modifier_ob  
... + str(modifier_ob)) # modifier  
..._ob.select = 0  
...context.selected_objects[0]  
...objects[one.name].select = 1
```

```
print("please select exactly two objects, the last  
...  
... OPERATOR CLASSES ...  
...  
... (copy.types.Operator):  
... adds an X mirror to the selected object"  
... = "object.mirror_mirror_x"  
... = "Mirror X"
```

```
... method  
... (cls, context)
```

04

Structure and Content

This academic program will cover a wide range of content, designed to provide professionals with specialized and up-to-date skills in front-end development with Vue. From fundamental aspects, such as web security and performance optimization, to advanced topics such as internationalization and testing best practices, the program will offer a comprehensive approach to ensure the creation of secure, efficient and globally accessible Vue applications. In addition, computer scientists will delve into the capabilities of Vue 3 to stay on top of the latest trends and techniques in modern web application development.





“

From implementing the Composition API, to developing dynamic applications with Vue Router, you'll tackle key topics including web security"

Module 1. Advanced Vue Front-End Development

- 1.1. Composition API in Front-End Web Development
 - 1.1.1. Composition API Compared to Options API
 - 1.1.2. Design Patterns and Logic Reuse
 - 1.1.3. Practical Examples and Advanced Applications
- 1.2. Vue Router in Front-End Web Development
 - 1.2.1. Advanced Routing Strategies
 - 1.2.2. Lazy Loading and Code Splitting with Vue
 - 1.2.3. Integrating Vue Router with Transitions and Animations
- 1.3. State Management with Vue in Front-End Web Development
 - 1.3.1. Architecture and Modularity in Vuex
 - 1.3.2. Advanced Patterns and Complex State Management
 - 1.3.3. Performance Optimizations in Vuex
- 1.4. Testing with Vue in Front-End Web Development
 - 1.4.1. Configuration of Test Environments with Vue Test Utils
 - 1.4.2. Unit and Integration Tests
 - 1.4.3. Mocking and Dependency Simulation
- 1.5. Security in Vue Applications
 - 1.5.1. Security in Vue
 - 1.5.1.1. Risk Identification and Mitigation
 - 1.5.1.2. Content Escape and Injection Prevention
 - 1.5.2. Safe State Handling and Local Storage
 - 1.5.2.1. Safe Practices
 - 1.5.2.2. Encryption of Sensitive Data
 - 1.5.2.3. Session Token Management
 - 1.5.3. Authentication and Route Protection
 - 1.5.3.1. Vue Router Configuration
 - 1.5.3.2. Creating Secure Browsing and Redirection





- 1.6. Development of Advanced Components with Vue in Front-End Web Development
 - 1.6.1. Design and Architecture of Reusable Components
 - 1.6.2. Advanced Slots and Composition Patterns
 - 1.6.3. Component Libraries and System Design
- 1.7. Performance Optimization with Vue in Front-End Web Development
 - 1.7.1. Analyzing and Improving the Performance of Vue Applications
 - 1.7.2. Deferred Loading and Code-Splitting Strategies
 - 1.7.3. Efficient Use of Watchers and Computers
- 1.8. Vue 3 and Application Composition in Front-End Web Development
 - 1.8.1. New Features of Vue 3
 - 1.8.2. Migration from Vue 2 to Vue 3
 - 1.8.3. Using Vue 3 for Large-Scale Applications
- 1.9. Server Side Rendering and SSR with Nuxt.js
 - 1.9.1. Configuring and Optimizing Nuxt.js for SSR
 - 1.9.2. SEO and Static Site Generation
 - 1.9.3. Transition from SPA to Universal Applications
- 1.10. State of the Art and Trends with Vue in Front-End Web Development
 - 1.10.1. Vue Ecosystem and Emerging Tools
 - 1.10.2. Vue and PWA Development
 - 1.10.3. Community, Continuous Learning and Resources.

“Through a combination of theory and practical exercises, you will equip yourself with specialized skills to secure, optimize and enhance the performance of Vue applications”

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 Advanced Vue Front-End Development 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 program will allow you to obtain your **Postgraduate Certificate in Advanced Vue Front-End Development** 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 Certificate in Advanced Vue Front-End Development**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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