Postgraduate Certificate
Advanced Web Architectures

tech *technological university*

Postgraduate Certificate
Advanced Web Architectures

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

Website: **www.techtitute.com/us/information-technology/postgraduate-certificate/advanced-web-architectures**

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01
Introduction

In the world of technology and web development there is a constant evolution in the development of applications. In this sense, having an effective architecture is the key between a successful project and one that fails. For this reason, greater emphasis has been placed on speed, scalability and security as differentiating elements from the rest of the competitors. In this context, the role of the IT professional is essential and opens up a world of job possibilities. This is the origin of this 100% online Postgraduate Certificate that will deepen in all the processes involved in the design and evolution of web architecture. To this end, students have at their disposal numerous didactic resources, accessible 24 hours a day, from any electronic device with an Internet connection.

Thanks to this Postgraduate Certificate, you will contribute to the development of web applications by attending to to the latest developments in the technological field"

The integration of the digital world in people's daily lives has made the vast majority of companies in various sectors bet on developing their businesses in this digital environment. This ecosystem is based on solid web architectures that not only fulfill their function, but also do so in an efficient, scalable and robust manner.

In this context, the profile of the IT professional has gained ground, being an indispensable piece for any company in the technology sector. Given this reality, TECH has designed this Postgraduate Certificate in Advanced Web Architectures that seeks to provide the graduate with the most comprehensive information in this field over 6 weeks.

To this end, the specialized faculty that has developed this Postgraduate Certificate places special emphasis on best practices for the construction and maintenance of web architectures, taking into account crucial aspects such as security, performance and scalability. To this end, it presents content with a theoretical-practical perspective and a large number of pedagogical tools such as specialized readings, video summaries, videos in detail or case studies.

In addition, thanks to the Relearning methodology, based on the reiteration of key concepts, students will learn much more effectively and in less time. Undoubtedly, a unique opportunity to boost the professional career through higher education with a flexible methodology. And is that the graduate only needs a digital device (mobile, tablet or computer) with internet connection to view, at any time of day, this degree.

This **Postgraduate Certificate in Advanced Web Architectures** contains the most complete and up-to-date program on the market.

- ◆ The development of practical cases presented by experts in Advanced Web Architectures
- ◆ The graphic, schematic and practical contents of the book provide theoretical and practical information on those disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used 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

Learn about the latest trends in the Web Application development process at any time"

"*Delve into the DevOps working model with the best training materials and grow professionally in the technology sector*"

You will explore with this Postgraduate Certificate the complexities of advanced web architecture: beyond HTML and CSS.

You will learn how to apply security and testing elements to ensure the performance of web applications.

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

Its 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 an immersive education programmed to learn in real situations.

This program's design focuses on Problem-Based Learning, through which the professional must try to solve the different professional practice situations that arise during the academic program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

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Objectives

The purpose of this Postgraduate Certificate is to enhance students' knowledge in Advanced Web Architectures. Thus, at the end of the 6-week Postgraduate Certificate, students will have the necessary competencies and skills to be able to develop a project of these characteristics from start to finish, in addition to enhancing their capacity for analysis, management and teamwork for the development of applications in this digital environment.

The goal of TECH is you: give your career the boost it needs and specialize in the area of Advanced Web Architectures"

General Objectives

- Generate specialized knowledge on advanced web architecture

- Address the development of the Back-end part of the web application, reviewing the available technologies, integration mechanisms such as APIs, message and event queues, deployment and optimization processes

- Create personalized experiences, monitor and monetize the use of the website

- Consolidate application design and development best practices with a project management that favors continuous iteration, integration and deployment

- Analyze in depth the aspects related to the security of web applications, with special applications, with a special focus on the most common attacks and the prevention, detection and mitigation prevention, detection and mitigation mechanisms

Specific Objectives

♦ Analyze the web application development process and its methodologies

♦ Examine the DevOps working model and its implications

♦ Develop the mechanisms and solutions for code version control

♦ Specify the process of integration and continuous deployment of applications

♦ Establish the tasks of quality control and application maintenance

♦ Deepen the cost and release management in the web project

You will achieve your objectives thanks to our didactic tools and the most specialized team of teachers in the development of web applications"

03
Course Management

TECH has selected an excellent teaching team versed in Software, Computing and Systems with extensive professional experience in their sector. In this way, students are guaranteed to acquire a solid and very useful learning experience, based on the mastery of Web Architectures of these teachers. Likewise, in this academic itinerary, the students will be able to solve any doubt they may have thanks to the proximity of the teaching staff.

Succeed with the best and acquire the knowledge and skills you need to embark on Advanced Web Architectures industry"

Management

Dr. Pantaleón García del Valle, Eduardo

- Solutions Architect at Amazon Web Services (AWS)
- Solutions Architect at Liferay, Inc
- Technical Manager at Jungheinrich AG
- Senior Software Engineer and Team Manager at Liferay
- Project Manager at Protecmedia
- Organization and delivery of online technical webinars within the AWS Customer Proficiency Plan program
- Member of the Alumni Mentoring program at Carlos III University of Madrid, for career advice to students and recent graduates
- Graduated in Telecommunication Engineering from Carlos III University of Madrid
- PhD in Software, Systems and Computing from the Polytechnic University of Madrid
- Master's Degree in Computer Languages and Systems from the National University of Distance Education (UNED)
- Executive Data Science Specialization from Johns Hopkins University

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Structure and Content

The syllabus has been designed based to the requirements of IT applied to the Specify of this sector, following the requirements proposed by the teaching team of this Postgraduate Certificate. In this sense, the faculty of this program has thus established a curriculum whose module offers a broad perspective of Advanced Web Architectures. It will also address a variety of fundamental and advanced topics related to the creation of robust and scalable web applications through high quality teaching materials.

Expert curriculum and quality content are the key to your learning effective and unique"

Module 1. Advanced Web Architectures

1.1.   Advanced Web Architectures
    1.1.1.   Service-oriented architectures and web-oriented architectures
    1.1.2.   Functional and non-functional aspects of web architectures
    1.1.3.   Trends and future of web architectures

1.2.   Web Architecture Components
    1.2.1.   Client-side components
    1.2.2.   Network components
    1.2.3.   Server-side components

1.3.   Communication protocols in web architectures
    1.3.1.   OSI model and application layer
    1.3.2.   Hypertext Transfer Protocol (HTTP/S)
    1.3.3.   Other Protocols (FTP, SMTP, Websockets)

1.4.   Layers of a web architecture
    1.4.1.   Presentation Layer
    1.4.2.   Application Layer
    1.4.3.   Data layer

1.5.   Types of web architectures
    1.5.1.   Monolithic architectures
    1.5.2.   Microservice-oriented architectures
    1.5.3.   Serverless architectures

1.6.   Architecture Patterns from Web Applications
    1.6.1.   Model - View - Controller (MVC)
    1.6.2.   Model-view-presenter (MVP)
    1.6.3.   Model-view-view-model (MVVM)

1.7.   Best practices in web architectures
    1.7.1.   Security and testing by design
    1.7.2.   Scalability and resilience
    1.7.3.   Reusability, extensibility and integrability

1.8.   Web architecture design
    1.8.1.   Business requirements analysis
    1.8.2.   Diagram types and tools
    1.8.3.   Documentation

Thanks to this Postgraduate Certificate you will be able to manage a web project with guarantees of success. Enroll now"

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.

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.

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

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.
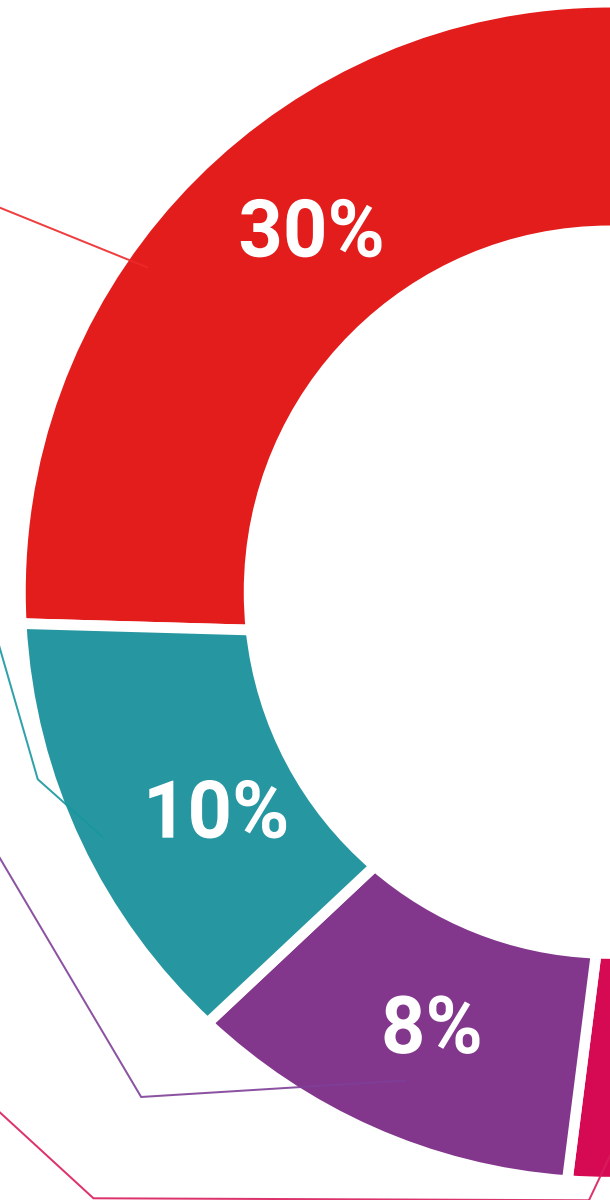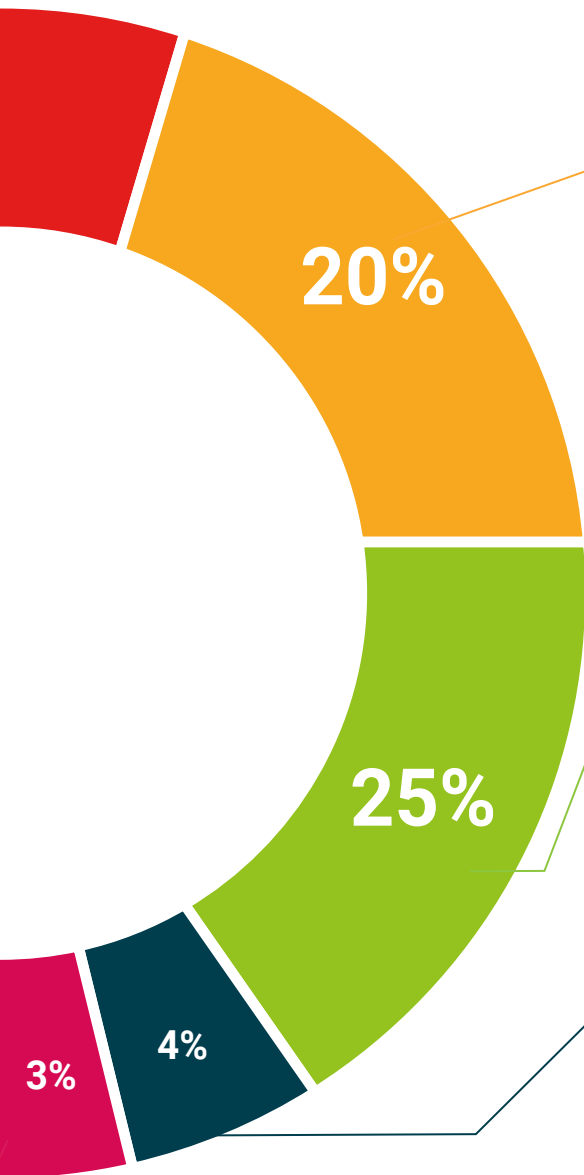
Practising Skills and Abilities

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.

30%

10%

8%

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 Certificate in Advanced Web Architectures guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This **Postgraduate Certificate in Advanced Web Architectures** ontains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate**, issued by**TECH Technological University.** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate Advanced Web Architectures**

Official Nº of Hours: **150 h.**

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Awards the followi ng

DIPLOMA

to

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

POSTGRADUATE CERTIFICATE

in

Advanced Web Architectures

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy .

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarr o
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.

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