

Postgraduate Certificate

Web Application Development with Artificial Intelligence



Postgraduate Certificate Web Application Development with Artificial Intelligence

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

Website: www.techtute.com/pk/artificial-intelligence/postgraduate-certificate/web-application-development-artificial-intelligence

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01

Introduction

Artificial Intelligence (AI) in cloud computing provides a wide range of applications, ranging from data analysis to process automation or cyber security. In this way, organizations take advantage of the power of Machine Learning without the need to invest in expensive infrastructure or specialized resources. In addition, services in virtual spaces allow the implementation of chatbots that can interact with users in a natural way and provide solid answers to consumers' frequently asked questions. Aware of their advantages, organizations are constantly looking to incorporate IT specialists in this area. For this reason, TECH has launched a 100% online university program that will perfect these web projects with Artificial Intelligence.



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TECH creates a flexible and 100% online university degree to meet the real needs of professionals”

Optimizing the deployment process on websites is a key procedure for IT specialists, as it saves time and resources. As a result, experts can devote more time to innovation or the development of new functionalities. In this sense, these procedures make it easier for professionals to respond with immediacy to users' needs and to problems that arise to improve the competitiveness of the site. In addition, with Artificial Intelligence, online portals are updated more frequently and with fewer interruptions. As a result, end consumers experience a more reliable service. This significantly improves customer satisfaction and brand loyalty.

Faced with this situation, TECH implements an advanced program that will offer keys to optimize web projects through Intelligent Computing. During 6 weeks of intensive updating, students will delve into the preparation of the working environment for web development with Artificial Intelligence. In the same way, the syllabus will delve into *Frontend* and *Backend* procedures, which will nurture the IT procedures. In addition, the curriculum will analyze the creation of databases for graduates to store large volumes of information.

Thanks to the fact that this Postgraduate Certificate is developed through a 100% online methodology, professionals will have the possibility of expanding their learning without having to adhere to uncomfortable pre-established study schedules. Also, this university program is designed and taught by reference specialists in Web Application Development with Artificial Intelligence, who have extensive experience in the IT industry. Therefore, all the knowledge provided to the students will have a complete applicability in daily computing practice. Students will be highly qualified to successfully face the challenges they will face during their web software projects, which will allow them to stand out in a digital sector that is evolving by leaps and bounds.

This **Postgraduate Certificate in Web Application Development with Artificial Intelligence** 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 Artificial Intelligence in 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



You will optimize the process of website deployments and ensure that updates are deployed efficiently to users"

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Do you want to specialize in the creation of Workspaces best suited for project creation? Achieve it in 150 hours with this revolutionary program"

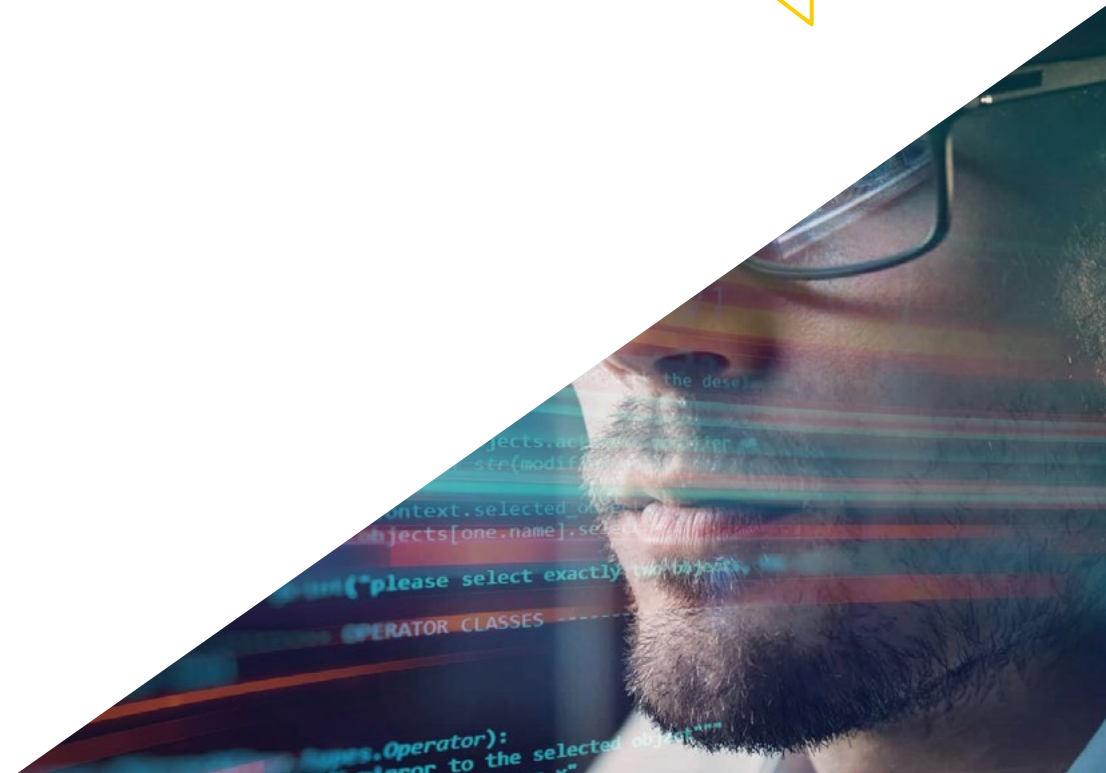
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 delve into the design patterns in products with Artificial Intelligence to provide the most innovative proposals.

Relearning will enable you to learn with less effort and more performance, involving you more in your professional specialization.



02

Objectives

Thanks to this university program, graduates will acquire comprehensive skills for the implementation of web projects. In this way, they will successfully address Frontend design and Backend optimization with the inclusion of Artificial Intelligence elements. In tune with this, students will optimize the deployment processes of websites, implementing tools aimed at improving their efficiency. On the other hand, students will integrate Machine Learning to cloud computing. This will allow IT professionals to design highly scalable web projects.



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*You will have real case studies
that will enhance your skills
in database creation”*

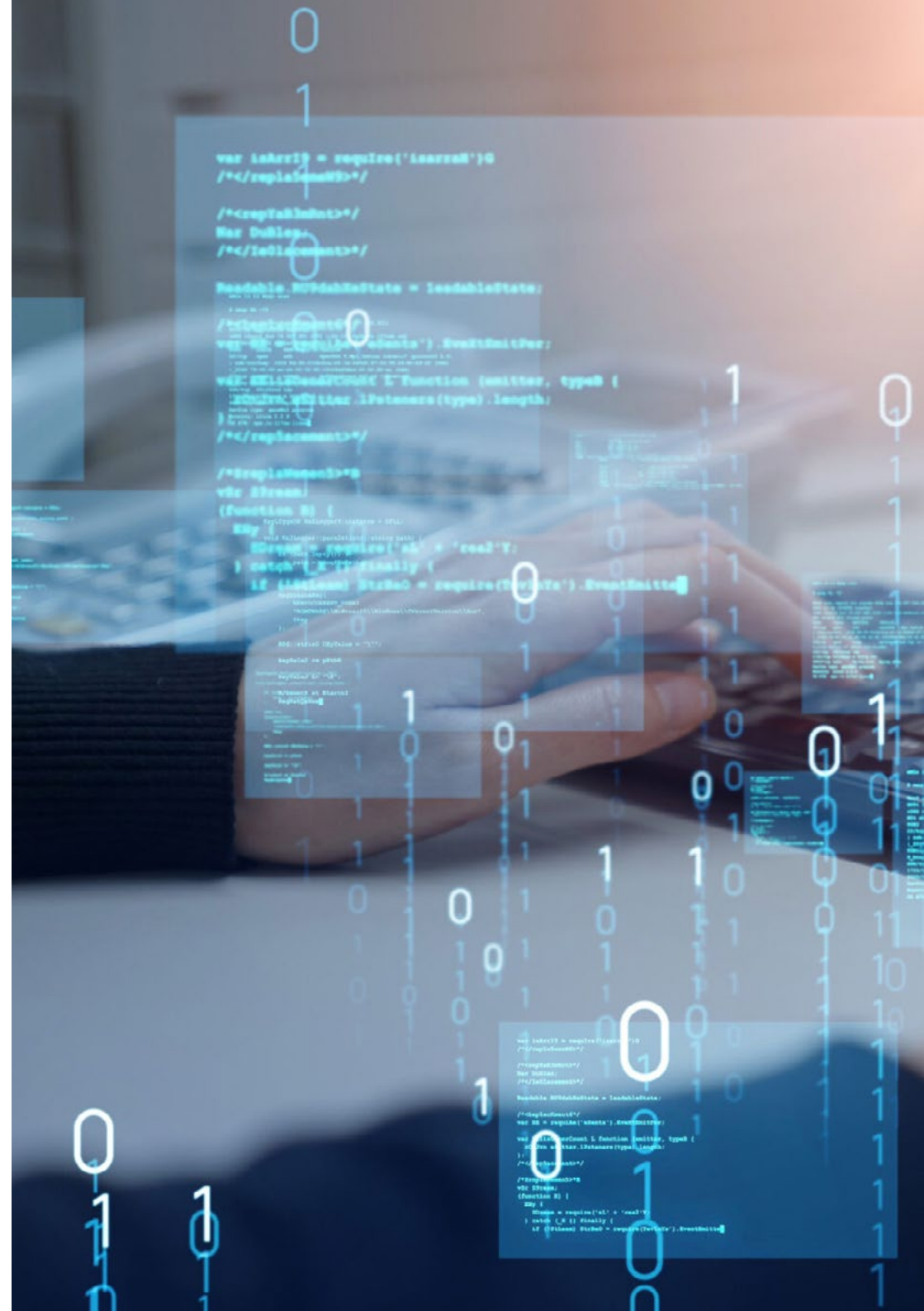


General Objectives

- Develop skills to set up and manage efficient development environments, ensuring a solid foundation for the implementation of AI projects
- Acquire skills in planning, executing and automating quality tests, incorporating AI tools for *bug* detection and remediation
- Understand and apply performance, scalability and maintainability principles in the design of large-scale computing systems
- Become familiar with the most important design patterns and apply them effectively in software architecture



You will have access to a Virtual Library full of multimedia resources that will strengthen your knowledge in a dynamic way. All this content will be available 24 hours a day!





Specific Objectives

- ◆ Develop comprehensive skills for the implementation of web projects, from frontend design to backend optimization, with the inclusion of AI elements
- ◆ Optimize the process of deploying websites, incorporating techniques and tools to improve speed and efficiency
- ◆ Integrate AI into cloud computing, enabling students to create highly scalable and efficient web projects
- ◆ Acquire the ability to identify specific problems and opportunities in web projects where AI can be effectively applied, such as in text processing, personalization, content recommendation, etc
- ◆ Encourage students to keep abreast of the latest trends and advances in AI for its proper application in web projects

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An exhaustive update on Web Application Development with Artificial Intelligence through a program designed by real specialists"

Management



Dr. Peralta Martín-Palomino, Arturo

- ♦ CEO and CTO at Prometheus Global Solutions
- ♦ CTO at Korporate Technologies
- ♦ CTO at AI Shepherds GmbH
- ♦ Consultant and Strategic Business Advisor at Alliance Medical
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- ♦ Ph.D. in Psychology from the University of Castilla - La Mancha
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- ♦ Member of: SMILE Research Group



Mr. Castellanos Herreros, Ricardo

- ◆ Specialist in Computer Systems Engineering
- ◆ Chief Technology Officer at OWQLO
- ◆ Freelance Technical Consultant
- ◆ Mobile Applications Developer for eDreams, Fnac, Air Europa, Bankia, Cetelem, Banco Santander, Santillana, Groupón and Grupo Planeta
- ◆ Web Developer for Openbank and Banco Santander
- ◆ Machine Learning Engineer course at Udacity
- ◆ Technical Engineer in Computer Systems from the University of Castilla la Mancha

04

Structure and Content

This program will focus on the practical application of Machine Learning in web projects. For this purpose, the curriculum will cover from the preparation of the environment to the efficient deployment. Along the same lines, the syllabus will include advanced procedures such as Frontend and Backend, highlighting the optimization of the deployment process. In turn, the didactic materials will provide students with the keys to integrate Artificial Intelligence in cloud computing. The university qualification will also enable experts to work on projects with LAMP and MEVN environments, thus gaining diversified experience.



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You will optimize the deployment of your websites by implementing the most effective techniques to improve their speed and efficiency”

Module 1. Web Projects with AI

- 1.1. Preparation of the Working Environment for Web Development with AI
 - 1.1.1. Configuration of Web Development Environments for Projects with Artificial Intelligence
 - 1.1.2. Selection and Preparation of Essential Tools for AI Web Development
 - 1.1.3. Integration of Specific Libraries and Frameworks for Web Projects with Artificial Intelligence
 - 1.1.4. Implementation of Best Practices in the Configuration of Collaborative Development Environments
- 1.2. Workspace Creation for AI Projects
 - 1.2.1. Effective Design and Organization of Workspaces for Web Projects with Artificial Intelligence Components
 - 1.2.2. Use of Project Management and Version Control Tools in the Workspace
 - 1.2.3. Strategies for Efficient Collaboration and Communication in the Development Team
 - 1.2.4. Adaptation of the Workspace to the Specific Needs of AI Web Projects
- 1.3. Design Patterns in AI Products
 - 1.3.1. Identification and Application of Common Design Patterns in User Interface with Artificial Intelligence Components
 - 1.3.2. Development of Specific Patterns to Improve User Experience in Web Projects with AI
 - 1.3.3. Integration of Design Patterns in the Overall Architecture of AI Web Projects
 - 1.3.4. Evaluation and Selection of Adequate Design Patterns according to the Project Context
- 1.4. Frontend Development with AI
 - 1.4.1. Integration of AI Models into the Presentation Layer of Web Projects
 - 1.4.2. Development of Adaptive User Interfaces with Artificial Intelligence Elements
 - 1.4.3. Implementation of Natural Language Processing (NLP) Functionalities in the Frontend
 - 1.4.4. Strategies for Performance Optimization in Frontend Development with AI



- 1.5. Database Creation
 - 1.5.1. Selection of Database Technologies for Web Projects with Artificial Intelligence
 - 1.5.2. Design of Database Schemas for Storing and Managing AI-Related Data
 - 1.5.3. Implementation of Efficient Storage Systems for Large Volumes of Data Generated by AI Models
 - 1.5.4. Strategies for the Security and Protection of Sensitive Data in AI Web Project Databases
- 1.6. Back-End Development with AI
 - 1.6.1. Integration of AI Services and Models in the Backend Business Logic
 - 1.6.2. Development of Specific APIs and Endpoints for Communication between the Frontend and AI Components
 - 1.6.3. Implementation of Data Processing and Decision Making Logic in the Backend with Artificial Intelligence
 - 1.6.4. Strategies for Scalability and Performance in the Backend Development of Web Projects with AI
- 1.7. Optimizing Your Web Deployment Process
 - 1.7.1. Automating Web Project Build and Deployment Processes with AI
 - 1.7.2. Implementing CI/CD Pipelines Tailored to Web Applications with Artificial Intelligence Components
 - 1.7.3. Strategies for Efficient Release and Upgrade Management in Continuous Deployments
 - 1.7.4. Post-Deployment Monitoring and Analysis for Continuous Process Improvement
- 1.8. AI in Cloud Computing
 - 1.8.1. Integration of Artificial Intelligence Services in Cloud Computing Platforms
 - 1.8.2. Development of Scalable and Distributed Solutions using Cloud Services with AI Capabilities
 - 1.8.3. Strategies for Efficient Resource and Cost Management in Cloud Environments with AI-enabled Web Applications
 - 1.8.4. Evaluation and Comparison of Cloud Service Providers for AI-enabled Web Projects
- 1.9. Creating an AI-enabled Project for LAMP Environments
 - 1.9.1. Adaptation of Web Projects based on the LAMP Stack to include Artificial Intelligence Components
 - 1.9.2. Integration of AI-specific Libraries and Frameworks in LAMP Environments
 - 1.9.3. Development of AI Functionalities Complementing the Traditional LAMP Architecture
 - 1.9.4. Strategies for Optimization and Maintenance in Web Projects with AI in LAMP Environments
- 1.10. Creating an AI-enabled Project for MEVN Environments
 - 1.10.1. Integration of MEVN Stack Technologies and Tools with AI Components
 - 1.10.2. Development of Modern and Scalable Web Applications in MEVN Environments with AI Capabilities
 - 1.10.3. Implementation of Data Processing and Machine Learning functionalities in MEVN projects
 - 1.10.4. Strategies for Improving Performance and Security Enhancement of AI-enabled Web Applications in MEVN Environments



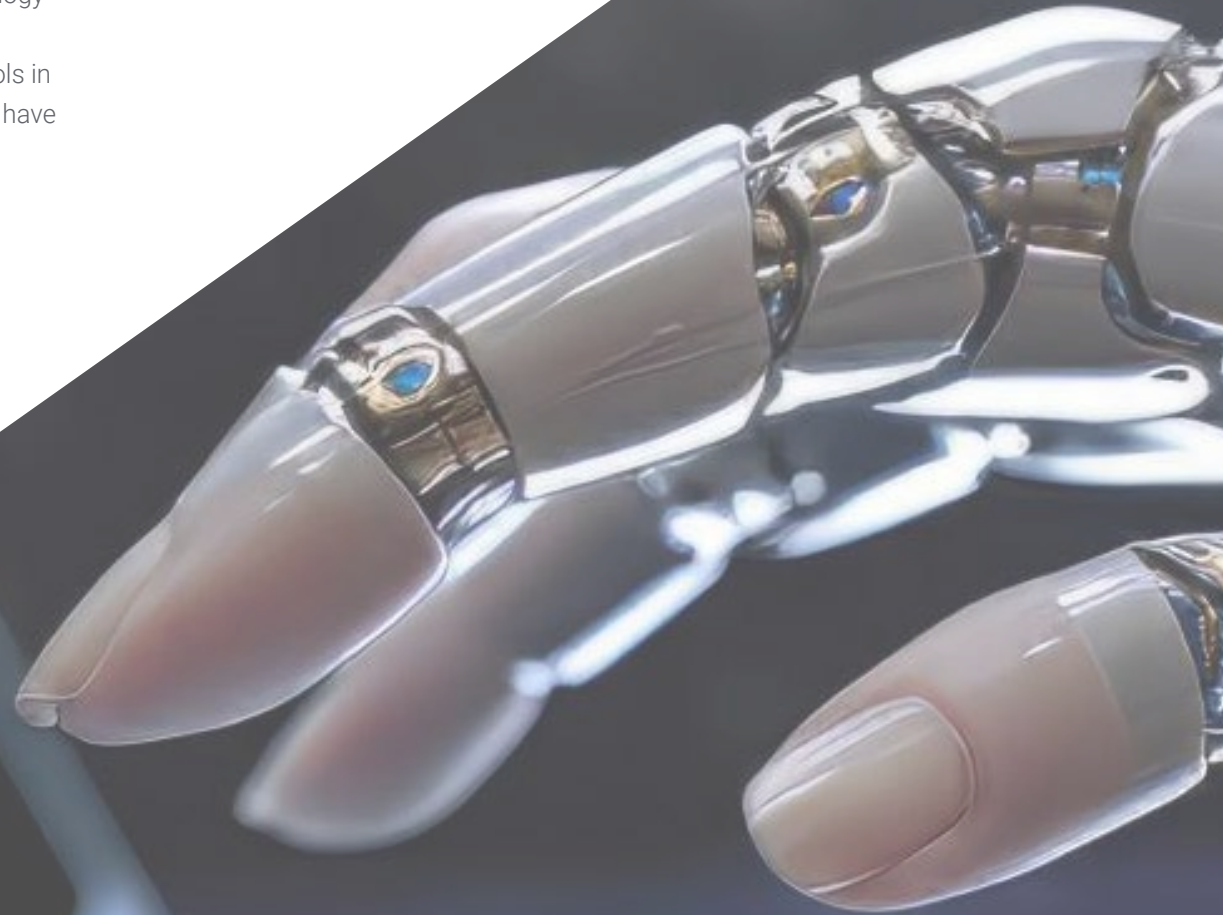
You will have a 100% online program that offers an immersive and solid educational experience. Don't miss the opportunity and enroll now"

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.





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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.

“

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 Web Application Development with Artificial Intelligence guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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

This **Postgraduate Certificate in Web Application Development with Artificial Intelligence** contains the most complete and up-to-date program on the market.

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

The certificate 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 in Web Application Development with Artificial Intelligence**

Official N° of Hours: **150 h.**



*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION 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
development lang
virtual classroom



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