Postgraduate Certificate

Artificial Intelligence Application Testing

tech technological university

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Postgraduate Certificate
Artificial Intelligence Application Testing

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/artificial-intelligence/postgraduate-certificate/artificial-intelligence-application-testing**

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01

Introduction

Technological advances in the IT field have served to enrich consumers' digital experiences. One example is Mobile Testing using Artificial Intelligence (AI). Thanks to this mobile application testing process, the quality of tests on devices such as smartphones is optimized. It also generates multiple benefits for experts, including faster testing. In addition, these automated tests are useful for programmers to detect problems early in the development cycle. Therefore, they can correct errors before the products reach end users. In this context, TECH launches a pioneering 100% online specialization that delves into AI for QA Testing.

You will detect the different bugs to ensure the quality and proper functioning of mobile applications thanks to this 100% online program"

When designing mobile applications, specialists must keep in mind the testing lifecycle. This alludes to the different phases that make up the planning, design, execution and monitoring of tests during the development of assets. In order to improve the efficiency and quality of these procedures, IT experts take advantage of Machine Learning tools. In this sense, AI improves every activity by speeding up testing, automating repetitive tasks and providing additional insights for informed decision making in mobile application development.

To optimize these procedures, TECH has implemented an advanced Postgraduate Certificate focused on creating automated tests through AI. Developed by an experienced teaching staff, the study plan will address Test Cases and bug detection in detail. The syllabus will also provide the keys to create the most effective test plans, which will help students to develop the most innovative mobile applications in the telecommunications market. The didactic materials will also provide students with the most modern Machine Learning tools for Web Testing. Moreover, the specialization includes real cases and the resolution of complex situations in simulated learning environments. In addition, experts will be able to individually plan their schedules and educational timetables.

Thanks to the fact that this Postgraduate Certificate is taught in a 100% online mode, computer scientists will have the possibility of updating their knowledge in the field of Testing in AI Applications without the need to make daily trips to an academic center. In addition, they will have at their disposal a wide variety of didactic resources in multimedia supports such as complementary readings or interactive summaries. It should be noted that the university program is based on the Relearning teaching system, of which TECH is a pioneer. This method consists of reiterating the key aspects of the syllabus in a natural and progressive way to ensure that they remain in the student's mind.

This **Postgraduate Certificate in Artificial Intelligence Application Testing** 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 Artificial Intelligence in Programming
- The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable 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 design innovative and creative projects adapted to the requirements of a growing technological sector”

You will become an API Testing specialist and will evaluate both the functionality and the performance and security of Programming Interface testing!"

Create test plans aimed at establishing sound strategies, verifying that the programs are properly executed before they are launched in the market.

Thanks to the Relearning system used by TECH you will reduce long hours of study and memorization.

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

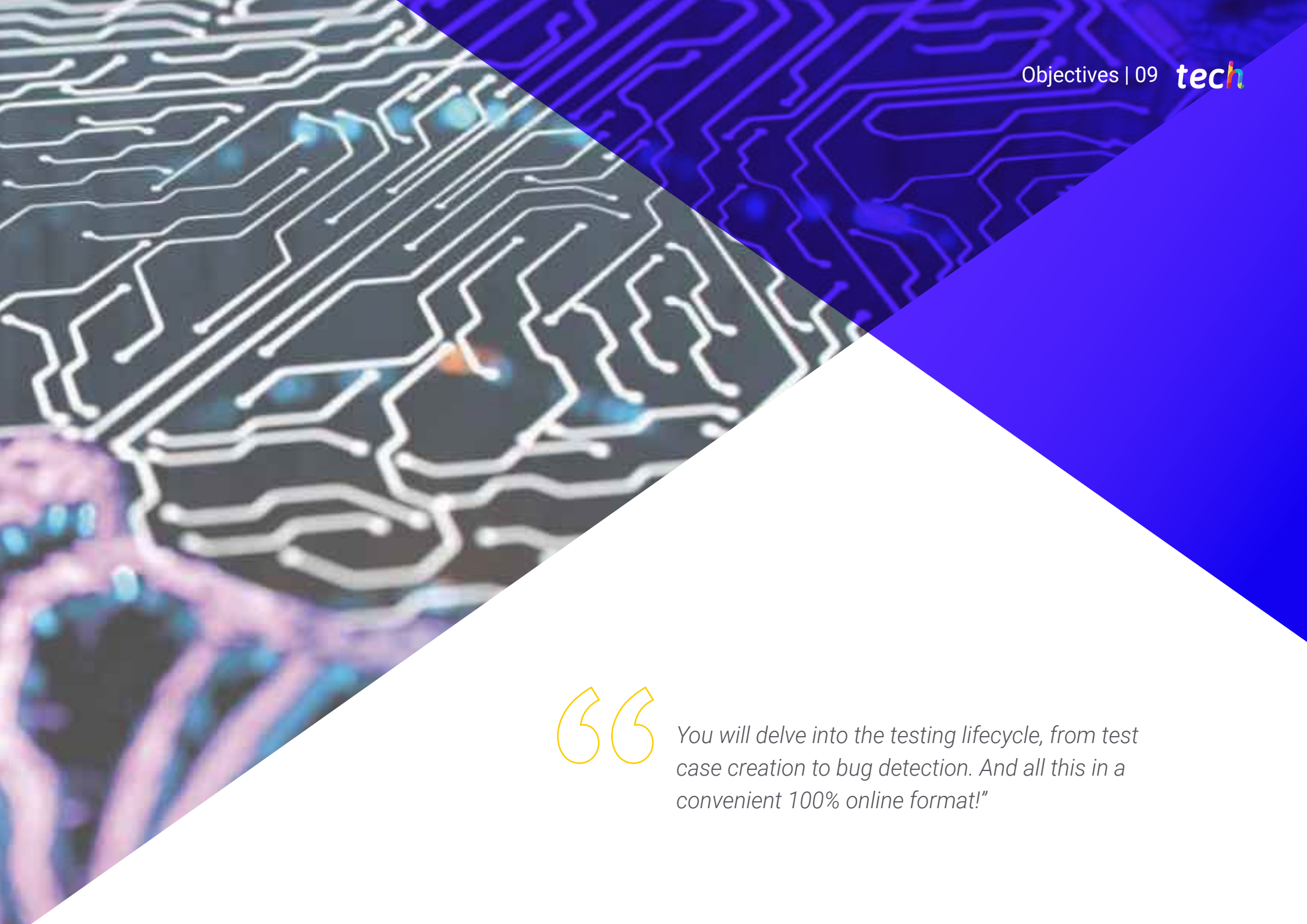
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

After this immersive learning experience, graduates will develop skills to design solid test plans. Therefore, professionals will cover different testing typologies and ensure software quality at all times. In sync with this, students will elaborate automated tests effectively, especially in web and mobile environments, integrating AI tools to improve process optimization. Similarly, computer scientists will master more advanced QA tools that are powered by AI. This will allow them more efficient bug detection and continuous software improvement.

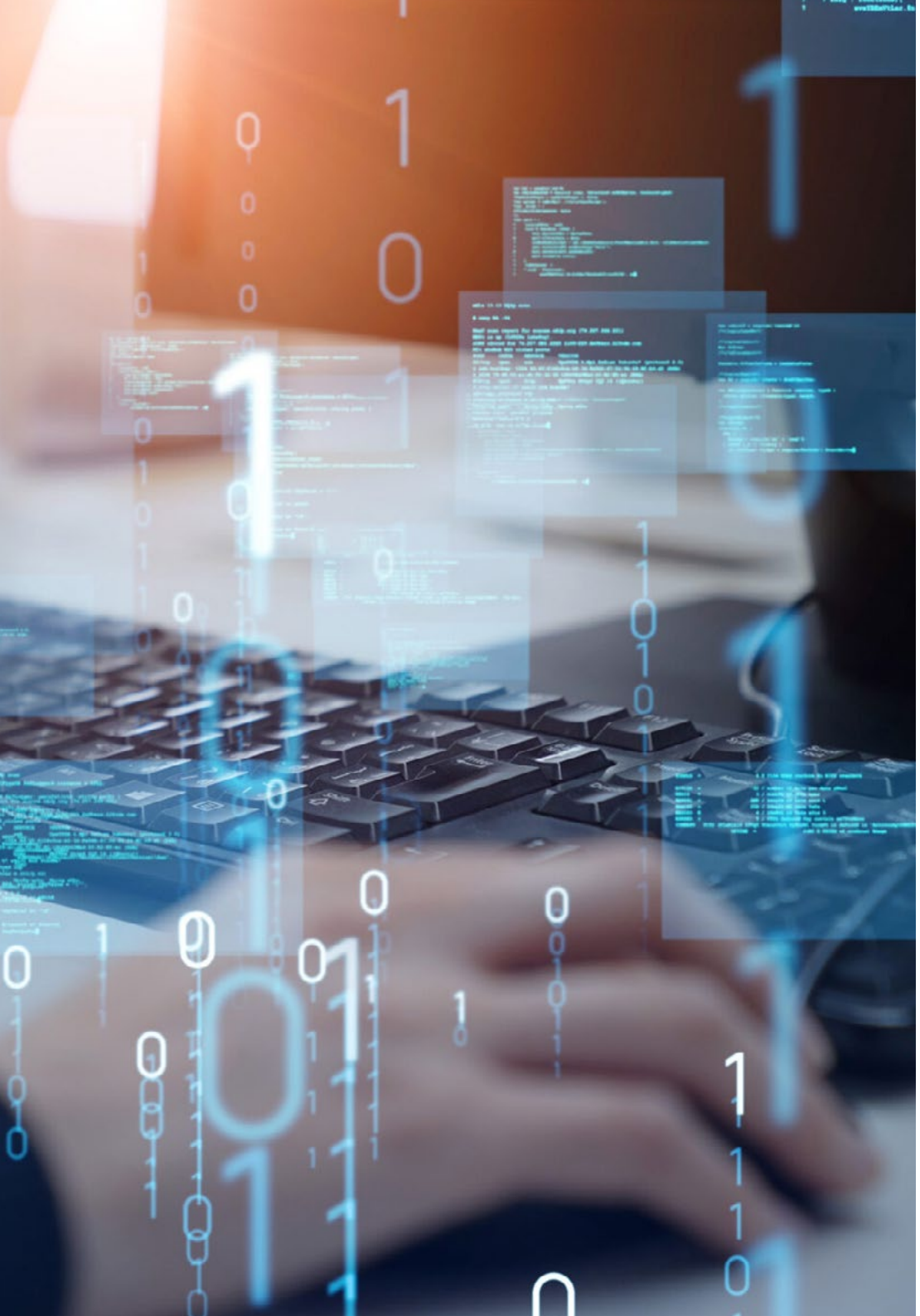


You will delve into the testing lifecycle, from test case creation to bug detection. And all this in a convenient 100% online format!"

General Objectives

- Develop skills to configure and manage efficient development environments, ensuring a solid foundation for the implementation of AI projects
- Acquire skills in planning, executing and automating quality testing, incorporating AI tools for bug detection and correction
- 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

No rigid schedules or evaluative timelines. That's how convenient this TECH program is!"



Specific Objectives

- Master principles and techniques for designing computer systems that are scalable and capable of handling large volumes of data
- Apply advanced skills in the implementation of AI-powered data structures to optimize software performance and efficiency
- Understand and apply secure development practices, with a focus on avoiding vulnerabilities such as injection, to ensure software security at the architectural level
- Generate automated tests, especially in web and mobile environments, integrating AI tools to improve process efficiency
- Use advanced AI-powered QA tools for more efficient bug detection and continuous software improvement

03

Course Management

In line with its philosophy of providing the highest educational excellence, TECH has a teaching staff of international prestige. These specialists have a broad working background, being part of renowned institutions related to telecommunications and technologies. Thanks to this, they are defined by having a deep knowledge of Testing in AI Applications and being up to date with the advances that have taken place in this field during the last decades. In this way, students have the guarantees they need to update themselves in a profession that is constantly advancing and offers numerous job opportunities.

You will have access to a syllabus designed by a renowned teaching staff, which will guarantee you a successful learning process"

Management

Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO at Korporate Technologies
- CTO at AI Shephers GmbH
- Consultant and Strategic Business Advisor at Alliance Medical
- Director of Design and Development at DocPath
- PhD. in Psychology from the University of Castilla La Mancha
- PhD in Economics, Business and Finance from the Camilo José Cela University
- PhD in Psychology from the University of Castilla La Mancha
- Master in Executive MBA from Universidad Isabel I
- Master's Degree in Sales and Marketing Management, Isabel I University
- Expert Master's Degree in Big Data by Hadoop Training
- Master's Degree in Advanced Information Technologies from the University of Castilla La Mancha
- Member of: SMILE Research Group

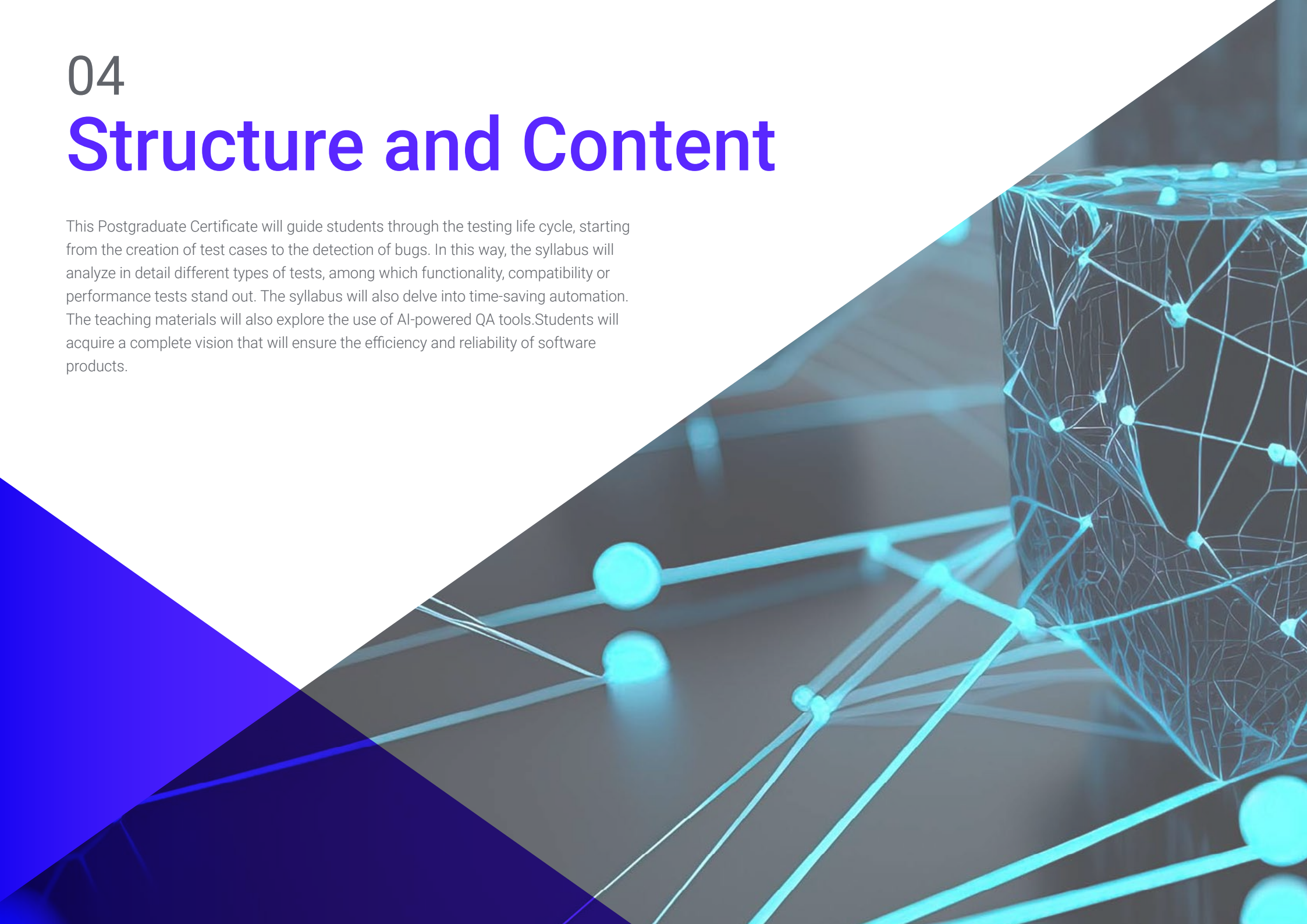
Mr. Castellanos Herreros, Ricardo

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

04

Structure and Content

This Postgraduate Certificate will guide students through the testing life cycle, starting from the creation of test cases to the detection of bugs. In this way, the syllabus will analyze in detail different types of tests, among which functionality, compatibility or performance tests stand out. The syllabus will also delve into time-saving automation. The teaching materials will also explore the use of AI-powered QA tools.Students will acquire a complete vision that will ensure the efficiency and reliability of software products.



You will create automated tests with Artificial Intelligence to execute procedures in an agile and frequent manner"

Module 1. AI for QA Testing

1.1. Software Testing Life Cycle
- 1.1.1. Description and Understanding of the Testing Life Cycle in Software Development
- 1.1.2. Phases of the Testing Life Cycle and its Importance in Quality Assurance
- 1.1.3. Integration of Artificial Intelligence in Different Stages of the Testing Life Cycle
- 1.1.4. Strategies for Continuous Improvement of the Testing Life Cycle using AI

1.2. Test Cases and Bug Detection with the Help of ChatGPT
- 1.2.1. Effective Test Case Design and Writing in the Context of QA Testing
- 1.2.2. Identification of Bugs and Errors during Test Case Execution
- 1.2.3. Application of Early Bug Detection Techniques using Static Analysis
- 1.2.4. Use of Artificial Intelligence Tools for the Automatic Identification of Bugs in Test Cases

1.3. Types of Testing
- 1.3.1. Exploration of Different Types of Testing in the QA Environment
- 1.3.2. Unit, Integration, Functional, and Acceptance Testing: Characteristics and Applications
- 1.3.3. Strategies for the Selection and Appropriate Combination of Testing Types in Projects with ChatGPT
- 1.3.4. Adaptation of Conventional Testing Types to Projects with ChatGPT

1.4. Creation of a Testing Plan Using ChatGPT
- 1.4.1. Design and Structure of a Comprehensive Testing Plan
- 1.4.2. Identification of Requirements and Test Scenarios in AI Projects
- 1.4.3. Strategies for Manual and Automated Test Planning
- 1.4.4. Continuous Evaluation and Adjustment of the Testing Plan as the Project Develops

1.5. AI Bug Detection and Reporting
- 1.5.1. Implementation of Automatic Bug Detection Techniques using Machine Learning Algorithms
- 1.5.2. Use of ChatGPT for Dynamic Code Analysis to Search for Possible Bugs
- 1.5.3. Strategies for Automatic Generation of Detailed Reports on Bugs Detected Using ChatGPT
- 1.5.4. Effective Collaboration between Development and QA Teams in the Management of AI-Detected Bugs

1.6. Creation of Automated Testing with AI
- 1.6.1. Development of Automated Test Scripts for Projects Using ChatGPT
- 1.6.2. Integration of AI-Based Test Automation Tools
- 1.6.3. Using ChatGPT for Dynamic Generation of Automated Test Cases
- 1.6.4. Strategies for Efficient Execution and Maintenance of Automated Test Cases in AI Projects

1.7. API Testing
- 1.7.1. Fundamental Concepts of API Testing and its Importance in QA
- 1.7.2. Development of Tests for the Verification of APIs in Environments Using ChatGPT
- 1.7.3. Strategies for Data and Results Validation in API Testing with ChatGPT
- 1.7.4. Use of Specific Tools for API Testing in Projects with Artificial Intelligence

1.8. AI Tools for Web Testing
- 1.8.1. Exploration of Artificial Intelligence Tools for Test Automation in Web Environments
- 1.8.2. Integration of Element Recognition and Visual Analysis Technologies in Web Testing
- 1.8.3. Strategies for Automatic Detection of Changes and Performance Problems in Web Applications Using ChatGPT
- 1.8.4. Evaluation of Specific Tools for Improving Efficiency in Web Testing with AI

1.9. Mobile Testing Using AI
- 1.9.1. Development of Testing Strategies for Mobile Applications with AI Components
- 1.9.2. Integration of Specific Testing Tools for AI-Based Mobile Platforms
- 1.9.3. Use of ChatGPT for Detecting Performance Problems in Mobile Applications
- 1.9.4. Strategies for the Validation of Interfaces and Specific Functions of Mobile Applications by AI

1.10. QA Tools with AI
- 1.10.1. Exploration of QA Tools and Platforms that Incorporate Artificial Intelligence Functionality
- 1.10.2. Evaluation of Tools for Efficient Test Management and Test Execution in AI Projects
- 1.10.3. Using ChatGPT for the Generation and Optimization of Test Cases
- 1.10.4. Strategies for Effective Selection and Adoption of QA Tools with AI Capabilities

This university program prepares you for the present and future challenges of Mobile Testing. Bet on TECH and experience immediate career advancement!"

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

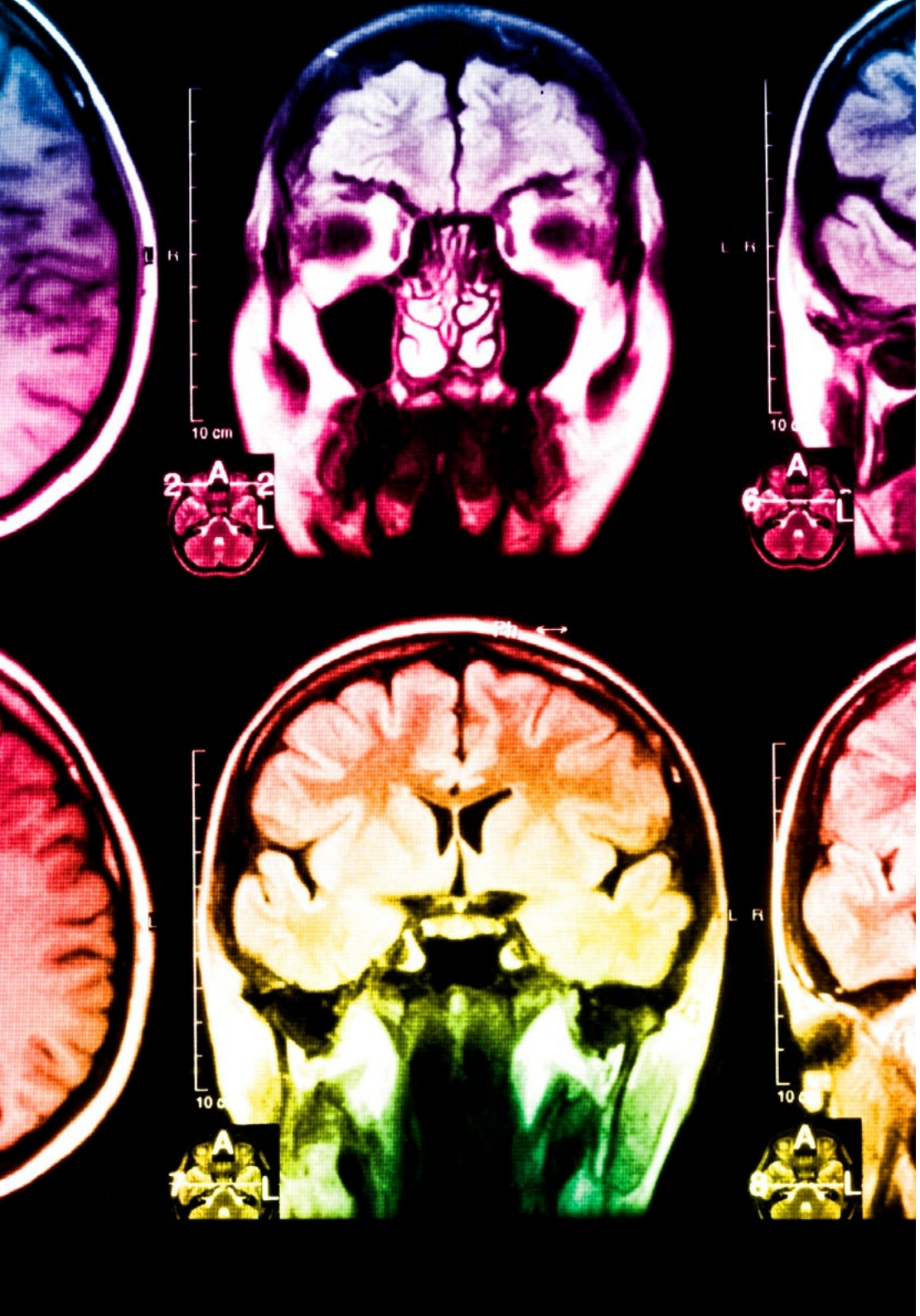
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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 R*elearning*.

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.

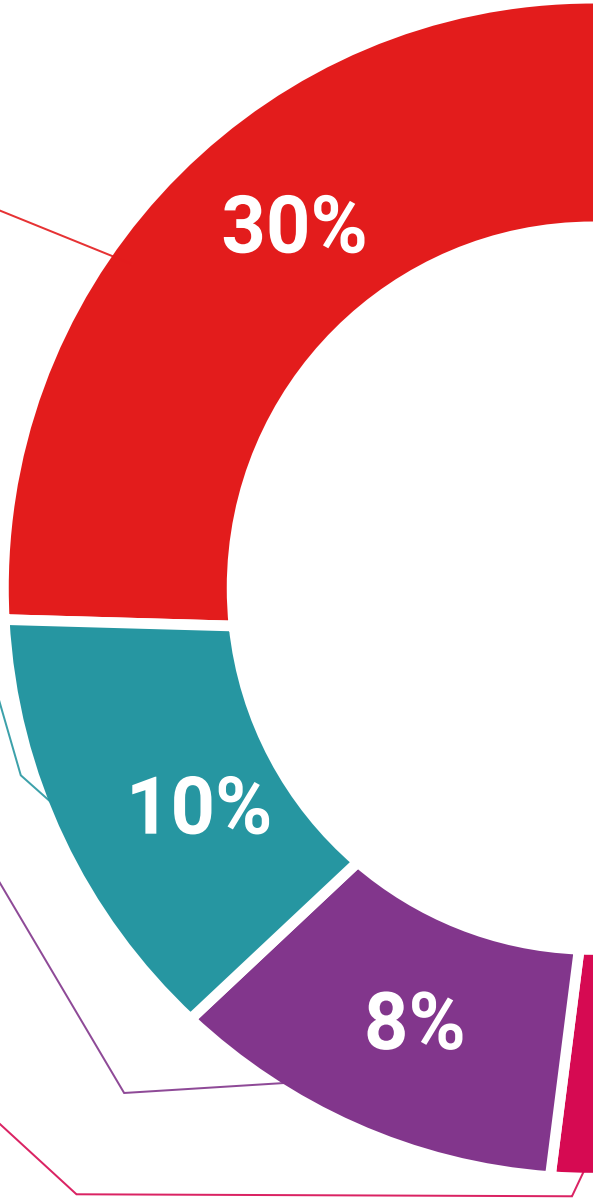
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

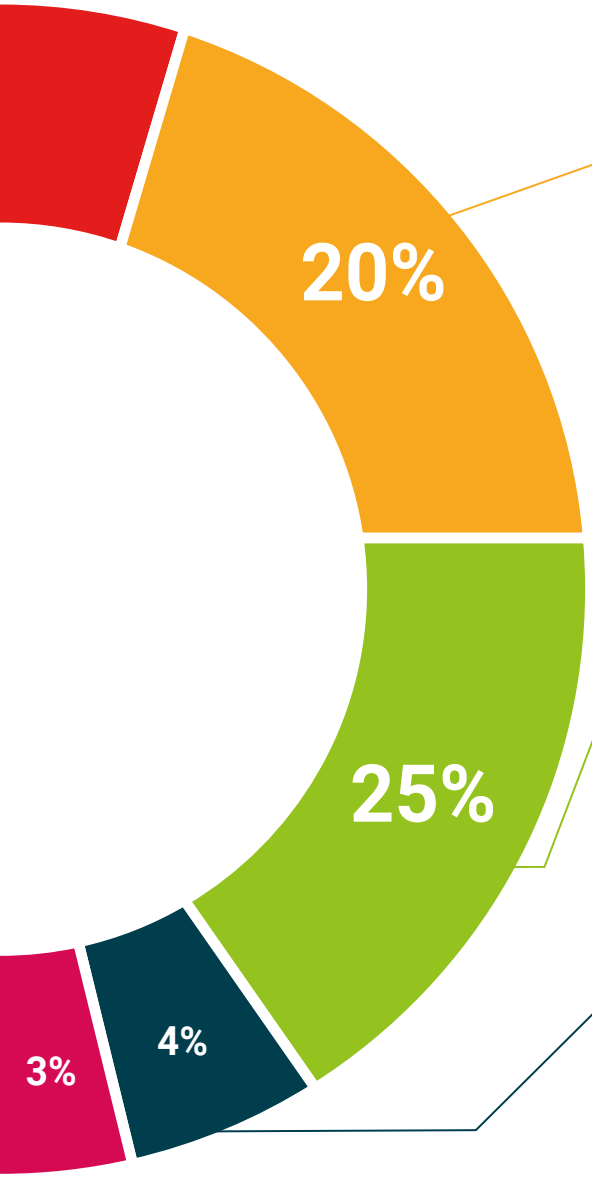
Practising Skills and Abilities

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

This Postgraduate Certificate in Artificial Intelligence Application Testing 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 Artificial Intelligence Application Testing** contains the most complete and up-to-date scientific 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 Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Artificial Intelligence Application Testing**

Modality: **online**

Duration: **6 weeks**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Artificial Intelligence Application Testing

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 Navarro
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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Postgraduate Certificate
Artificial Intelligence Application Testing

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Certificate

Artificial Intelligence Application Testing

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