

# Postgraduate Diploma Agile Methodology Tools for Programming





## Postgraduate Diploma Agile Methodology Tools for Programming

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-agile-methodology-tools-programming](http://www.techtute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-agile-methodology-tools-programming)

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# 01

# Introduction to the Program

Agile methodologies have transformed the way in which software development teams approach programming and project management. In recent years, institutions such as the Project Management Institute (PMI) and the International Software Engineering Institute (SEI) have promoted the use of agile practices as part of their frameworks for project management. Taking into account that the world of programming is constantly evolving, TECH has developed this postgraduate Diploma that will offer specialized education in the most advanced and relevant tools for working under this approach. Through a 100% online modality, specialists will master time management, collaboration between teams and the continuous delivery of quality products.





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*This Postgraduate Diploma will teach you how to manage agile projects efficiently using the most advanced tools, all from the comfort of your own home and at your own pace. Enroll and contribute to a better professional future!”*

Agile methodologies have revolutionized project management in the field of programming, allowing for greater flexibility, efficiency and collaboration between development teams. In this context, these approaches favor a dynamic work environment, where tasks are prioritized according to customer needs and market changes. This is how the implementation of agile tools has become key to ensuring a continuous delivery of value, optimizing both time and resources in technology projects.

As it is a field of great relevance today, TECH presents this Postgraduate Diploma in Agile Methodology Tools for Programming as the best opportunity to specialize in the area in a dynamic and efficient way. Through a comprehensive teaching structure, professionals will delve into concepts such as Scrum, Kanban, and Lean, among others, acquiring a comprehensive understanding of how to apply these methodologies in different environments. In addition, they will acquire practical knowledge about agile project management, including the use of specific tools to facilitate communication, planning and monitoring of software development tasks.

By acquiring this knowledge, graduates will gain a significant competitive advantage, as companies increasingly demand experts capable of leading agile teams and managing projects to high-quality standards. In this way, they will be prepared to optimize processes, improve team productivity and contribute to the digital transformation of organizations. Likewise, they will be able to position themselves in key roles such as Scrum Master, Product Owner or Agile Coach, areas with a growing demand in the technology sector.

At the same time, the 100% online modality of the program will allow students to adapt their learning at their own pace and from anywhere. In turn, the implemented Relearning methodology will facilitate learning through repetition and reflection, ensuring a deep assimilation of the content.

This **Postgraduate Diploma in Agile Methodology Tools for Programming** contains the most complete and up-to-date program on the market. Its most notable features are:

- ♦ The development of case studies presented by experts 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 process of 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



*Take the next step in your professional career with this Postgraduate Diploma" You will have access to flexible online education, adapted to your needs and your professional life"*

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*Enhance your future with the most in-demand agile methodologies in the sector. In this qualification you will learn independently through a 100% online modality. Improve your professional profile today!”*

Its teaching staff includes professionals from the field of medicine, who bring to this program the experience of their work, 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 an immersive learning experience designed to prepare for real-life situations.

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

*Turn your passion for programming into a professional advantage with this Postgraduate Diploma. With the support of specialized teachers and a flexible online methodology, you will be ready to lead projects.*

*Master agile methodologies with this Postgraduate Diploma! You will learn how to manage software projects with advanced tools such as Scrum and Kanban. Your career in programming will take a new turn!*



02

# Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.





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*Study at the world's largest online university and guarantee your professional success. The future starts at TECH”*

**The world's best online university, according to FORBES**

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

**The best top international faculty**

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

**The world's largest online university**

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



**The most complete syllabuses on the university scene**

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

**A unique learning method**

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

#### The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

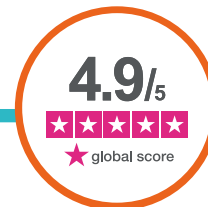
#### Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



#### Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



#### The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



# 03 Syllabus

This qualification has been designed to offer comprehensive education in one of the most effective and in-demand methodologies in the field of software development. Throughout the syllabus, professionals will master key tools such as Scrum, Kanban and Lean, which are essential for optimizing project management and value delivery in multidisciplinary teams. In addition, they will delve into each phase of the Agile process to manage resources, time and tasks efficiently. Finally, they will emphasize market changes, current customer needs, productivity and continuous software delivery.





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*This qualification will provide you with the necessary tools to transform the projects in which you participate, positioning you as a highly skilled professional in Agile Methodologies"*

## Module 1. Back-End Development III - Flask, API Creation and Basic Architecture from Scratch

- 1.1. Flask as Back-End Framework
  - 1.1.1. Back-End Framework. Purpose
  - 1.1.2. Flask. Features
  - 1.1.3. Preparing the Development Environment and Installing Flask
  - 1.1.4. First Project with Flask: "Hello World"
- 1.2. Routes and HTTP Requests in Flask
  - 1.2.1. Routes: How They Work in a Web Application
  - 1.2.2. HTTP Methods in Flask: GET, POST, PUT and DELETE
  - 1.2.3. Routes in Flask with Parameters and Data
  - 1.2.4. Organizing Routes in a Project
- 1.3. Controllers and Handling Responses in Flask
  - 1.3.1. Controller: Function and Responsibilities
  - 1.3.2. Types of Responses in Flask: Text, JSON and HTML
  - 1.3.3. Creating Controllers for APIs in Flask
  - 1.3.4. CRUD Operations in Controllers
- 1.4. RESTful APIs
  - 1.4.1. RESTful APIs. Principles
  - 1.4.2. HTTP Methods and Conventions in RESTful APIs
  - 1.4.3. Creating a RESTful API in Flask
  - 1.4.4. Designing a RESTful API with CRUD Operations
- 1.5. Databases and Flask with SQLite
  - 1.5.1. Databases in Web Applications
  - 1.5.2. Connecting to SQLite in Flask Projects
  - 1.5.3. Creating Tables and Models using SQLAlchemy
  - 1.5.4. CRUD Queries in SQLite for Data Management
- 1.6. Authentication and Basic Security in APIs
  - 1.6.1. Authentication and Authorization in APIs
  - 1.6.2. Creating a User Authentication System
  - 1.6.3. Using Tokens for Authentication in Flask
  - 1.6.4. Protecting User Paths and Data in APIs





- 1.7. Data Validation and Error Handling
  - 1.7.1. Error and Exception Handling in Flask
  - 1.7.2. Data Validation in API Requests
  - 1.7.3. Creating Custom Error Messages
  - 1.7.4. Validation Strategies and Error Handling in CRUD
- 1.8. Structuring Scalable APIs
  - 1.8.1. Organization and Structure of a Scalable Flask Project
  - 1.8.2. Modularization and Separation of Responsibilities in APIs
  - 1.8.3. Basic Optimization of APIs for Performance and Scalability
  - 1.8.4. Organizational Strategy for Large Projects
- 1.9. Real-Time Communication with WebSockets
  - 1.9.1. Websockets. Applications
  - 1.9.2. Implementation of WebSockets in Flask with Flask-SocketIO
  - 1.9.3. Real-Time Communication in Flask Applications
- 1.10. Application Deployment and Maintenance
  - 1.10.1. Preparing Flask Applications for Production
  - 1.10.2. Deployment on Popular Platforms such as Heroku and Render
  - 1.10.3. Using Docker for Containerized Deployment
  - 1.10.4. Monitoring and Maintaining Back-end Applications

## Module 2. Database Management and Optimization from Scratch

- 2.1. Database from Scratch
  - 2.1.1. Databases. Types
  - 2.1.2. Relational vs. Non-relational Databases
  - 2.1.3. SQL and NoSQL Programming Languages
- 2.2. Relational Data Modeling
  - 2.2.1. Relational Database Model
  - 2.2.2. Tables, Rows, and Columns in a Relational Database
  - 2.2.3. Primary and Foreign Keys: Relationships Between Tables
  - 2.2.4. Normalization: 1NF, 2NF, 3NF

- 2.3. SQL Language: DML and DDL
  - 2.3.1. SQL: Structured Query Language
  - 2.3.2. Create and Delete Queries: CREATE, DROP
  - 2.3.3. SELECT, INSERT, UPDATE and DELETE Queries
  - 2.3.4. Filtering and Sorting Data with SQL
- 2.4. Advanced SQL Queries
  - 2.4.1. Joins: INNER JOIN and OUTER JOIN
  - 2.4.2. Subqueries and Nested Queries
  - 2.4.3. Aggregate Functions in SQL: SUM, AVG, COUNT
- 2.5. NoSQL Databases and MongoDB
  - 2.5.1. NoSQL Database
  - 2.5.2. Comparison between SQL and NoSQL
  - 2.5.3. MongoDB: Document Database
  - 2.5.4. Flexible Schemas in NoSQL
- 2.6. Database Optimization
  - 2.6.1. Importance of Query Optimization
  - 2.6.2. Using Indexes in Relational Databases
  - 2.6.3. NoSQL Database Optimization
- 2.7. Database Security
  - 2.7.1. Database Security
  - 2.7.2. Encryption of Sensitive Data
  - 2.7.3. User and Permission Management in Databases
  - 2.7.4. Database Protection Strategies against Attacks
- 2.8. Database Scalability
  - 2.8.1. Database Scalability
  - 2.8.2. Horizontal and Vertical Partitioning
  - 2.8.3. Database Replication and Clustering
- 2.9. Data Backup and Recovery
  - 2.9.1. Importance of Database Backup
  - 2.9.2. Automatic and Manual Backup Techniques
  - 2.9.3. Data Recovery in Relational and NoSQL Databases

- 2.10. Database Implementation in Projects
  - 2.10.1. Database Design for a Real Project
  - 2.10.2. Database Integration with Back-End Applications

### Module 3. Development Tools from Scratch: Linux, Version Control, CI/CD, Docker and Agile Methodologies

- 3.1. Linux from Scratch
  - 3.1.1. Linux
  - 3.1.2. Differences between Linux and Other Operating Systems
  - 3.1.3. Popular Linux Distributions for Developers
  - 3.1.4. Configuration and Customization of the Development Environment
  - 3.1.5. Text Editors in Linux
- 3.2. Using the Linux Terminal from Scratch
  - 3.2.1. The Terminal. Uses and Functions
  - 3.2.2. Navigation Commands and File Management in the Terminal
  - 3.2.3. File and Directory Permissions in Linux
  - 3.2.4. Command Redirection and Use of Pipes to Optimize Tasks
- 3.3. Version Control with Git from Scratch
  - 3.3.1. Git: Cloud Providers
  - 3.3.2. Creation and Management of Repositories
  - 3.3.3. Workflow: git init, git add, git commit and git status
  - 3.3.3. Working with Branches: Creation, Merging and Conflict Resolution
- 3.4. Collaborating in Teams with GitHub from Scratch
  - 3.4.1. GitHub: Remote Repositories
  - 3.4.2. Connecting a Local Repository to GitHub: git remote. Initial Configuration
  - 3.4.3. Synchronization with Remote Repositories
  - 3.4.4. Pull Requests and Collaborative Code Review
- 3.5. CI/CD (I) - Continuous Integration (CI) with GitHub Actions from Scratch
  - 3.5.1. Continuous Integration (CI)
  - 3.5.2. Workflow Configuration in GitHub Actions
  - 3.5.3. Automation of Tests and Deployments





- 3.6. Docker from Scratch
  - 3.6.1. Docker and Containers
  - 3.6.2. Docker Installation and Configuration
  - 3.6.3. Docker Container Creation and Management
  - 3.6.4. Dockerfiles: Custom Image Creation
- 3.7. CI/CD (II) - Continuous Delivery (CD) with Docker and GitHub Actions from Scratch
  - 3.7.1. Continuous Delivery (CD)
  - 3.7.2. CD Pipeline Configuration with Docker and GitHub Actions
  - 3.7.3. Automated Deployment with Docker Compose
- 3.8. Agile Methodologies from Scratch (I). Principles and Values
  - 3.8.1. Agile Methodologies: Principles
  - 3.8.2. The Agile Manifesto: Fundamental Values and Principles
  - 3.8.3. Comparison with Traditional Methodologies: Waterfall vs. Agile
- 3.9. Agile Methodologies (II): Scrum from Scratch
  - 3.9.1. Scrum and its Applicability
  - 3.9.2. Key Roles in Scrum: Product Owner, Scrum Master and Development Team
  - 3.9.3. Scrum Artifacts: Product Backlog, Sprint Backlog and Product Increment
  - 3.9.4. Scrum Events: Sprint Planning, Daily Scrum, Sprint Review and Sprint Retrospective
- 3.10. Agile Methodologies (III): Kanban and Metrics from Scratch
  - 3.10.1. Kanban and its Visual Approach
  - 3.10.2. Key Elements in Kanban: Columns, Cards and WIP Limits
  - 3.10.3. Agile Metrics: Burnup, Burndown Charts, Velocity and Lead Time

“What are you waiting for to become an agile expert and take a qualitative leap in your career? This Postgraduate Diploma will provide you with the necessary tools to boost your career”

# 04

## Teaching Objectives

The main goal of this Postgraduate Diploma is to provide the knowledge and skills necessary to successfully implement and manage Agile projects. Through an innovative approach, the program will enable professionals to gain an in-depth understanding of the most widely used Agile Methodologies in software development, including Scrum, Kanban and Lean. In this way, they will know how to optimize workflow and ensure the continuous delivery of high-quality products. They will also acquire the ability to lead teams effectively. To this end, they will be instructed in the management of tasks, resources and time within an agile environment.





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*After this TECH program, you will be able to transform the projects in which you participate, leading multidisciplinary teams with a strategic and agile vision”*



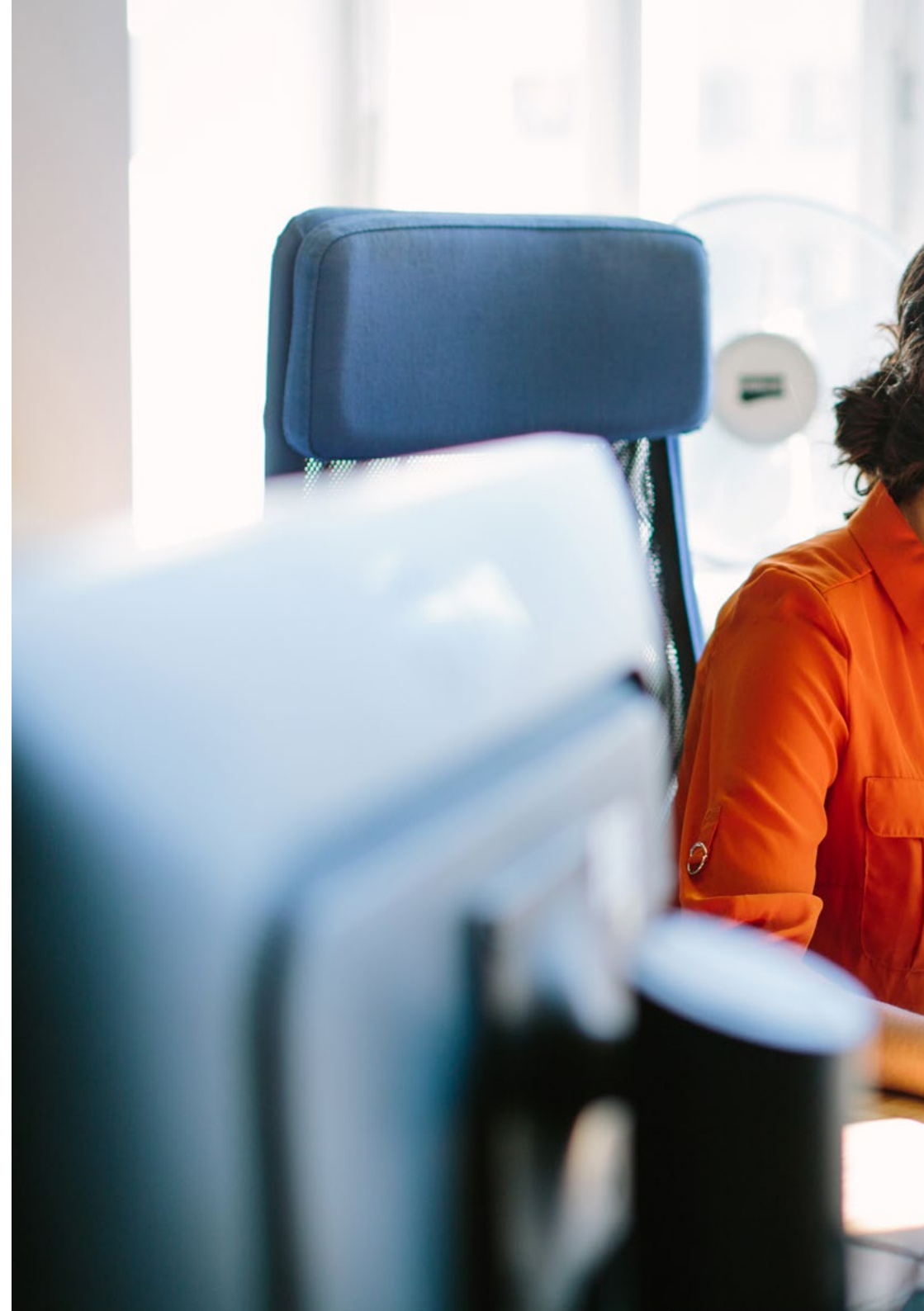
## General Objectives

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- ♦ Apply the fundamental principles of Agile methodologies in programming projects
- ♦ Implement Agile tools and frameworks to optimize project management
- ♦ Improve communication and collaboration in software development teams
- ♦ Adapt programming processes to changes and customer needs in an agile way
- ♦ Manage tasks and resources in projects using Agile prioritization techniques
- ♦ Design effective solutions through iterative and adaptive planning
- ♦ Facilitate Agile meetings and dynamics to encourage continuous improvement
- ♦ Use specific digital tools for agile project management
- ♦ Ensure software quality by applying continuous integration and delivery practices
- ♦ Develop a strategic and flexible vision to lead successful programming projects



*TECH will give you access to 100% online learning that combines innovation, flexibility and quality content. This is how you will become the expert who will lead the future of Agile Methodologies"*







## Specific Objectives

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### **Module 1. Back-End Development III - Flask, API Creation and Basic Architecture from Scratch**

- ♦ Develop RESTful APIs using Flask
- ♦ Integrate databases into Flask applications
- ♦ Implement authentication and security in APIs
- ♦ Design the basic architecture of a back-end application with Flask

### **Module 2. Database Management and Optimization from Scratch**

- ♦ Identify the different types of databases and their characteristics
- ♦ Understand and apply the relational data model
- ♦ Develop SQL skills for database management
- ♦ Use advanced SQL queries

### **Module 3. Development Tools from Scratch: Linux, Version Control, CI/CD, Docker and Agile Methodologies**

- ♦ Operate the Linux operating system at the command line level
- ♦ Master the use of Git for version control
- ♦ Implement Continuous Integration and Deployment (CI/CD) pipelines
- ♦ Create and manage Docker containers

# 05 Career Opportunities

This qualification will open up a range of professional opportunities in the technology sector, where the demand for experts in agile methodologies continues to grow steadily. Graduates will therefore be prepared to take on key roles in companies in various sectors, leading teams and optimizing software development processes. They will be qualified to work as Scrum Masters, Product Owners or Agile Coaches. In addition, they will be able to access positions of responsibility within agile teams, such as agile project managers, responsible for guaranteeing the correct implementation of methodologies in all phases of the project life cycle.





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*This Postgraduate Diploma not only offers cutting-edge training, but also a direct route to accessing leadership roles in a constantly evolving sector”*



### Graduate Profile

Graduates will be highly qualified professionals capable of managing and leading technology projects using an Agile approach. In this sense, the profile will be characterized by a mastery of tools such as Scrum, Kanban and Lean, enabling them to implement efficient, adaptable solutions aligned with the changing requirements of the market. In addition, you will not only have a solid theoretical understanding of agile methodologies, but also practical experience that will enable you to apply this knowledge effectively in complex professional environments. Finally, you will be prepared to play key roles within multidisciplinary teams.

*Your agile approach and your ability to lead digital transformations in organizations will position you as a high-impact professional, ready to take on leadership roles and contribute to innovation.*

- ♦ **Adaptability to Change:** Manage project requirements and lead teams in dynamic environments, where flexibility and responsiveness to new challenges are essential to the success of the project.
- ♦ **Teamwork and Collaboration:** Work collaboratively within multidisciplinary teams, fostering fluid communication and constant interaction among all team members.
- ♦ **Time Management and Priorities:** Prioritizing tasks and managing time effectively to tackle multiple tasks or projects simultaneously, ensuring that deadlines and objectives are met without compromising quality
- ♦ **Resolution of Complex Problems:** Analyze complicated situations and propose innovative solutions to address and solve problems efficiently within agile work cycles







After completing the program, you will be able to use your knowledge and skills in the following positions:

- 1. Scrum Master:** Responsible for guiding teams in the adoption of Scrum methodology, facilitating agile ceremonies and removing obstacles to ensure an efficient workflow.
- 2. Product Owner:** Responsible for defining product priorities, managing the backlog and ensuring that the development team meets the objectives aligned with customer needs.
- 3. Agile Coach:** Agile team mentor, helping them to implement agile practices, improve processes and promote an agile culture within the organization.
- 4. Agile Project Manager:** Project manager for agile methodologies, ensuring the delivery of results on time, within budget and with the highest quality, managing teams and resources efficiently.
- 5. Agile Methodology Consultant:** Responsible for helping companies to implement or improve their agile practices, providing strategies and solutions tailored to the client's needs.
- 6. Agile Developer:** Software coordinator within agile teams, working in sprints to deliver functional software solutions aligned with customer expectations.
- 7. Agile Team Manager:** Work manager with agile teams, ensuring fluid communication, the correct allocation of tasks and effective collaboration between all team members.
- 8. Agile Chief Technology Officer (CTO):** Leader of the company's technological strategies under agile principles, managing product development and systems evolution with an agile and flexible approach.

06

# Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.





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*TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”*

## The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes  
(which you might not be able to attend)”*





### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"*

### The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



### The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

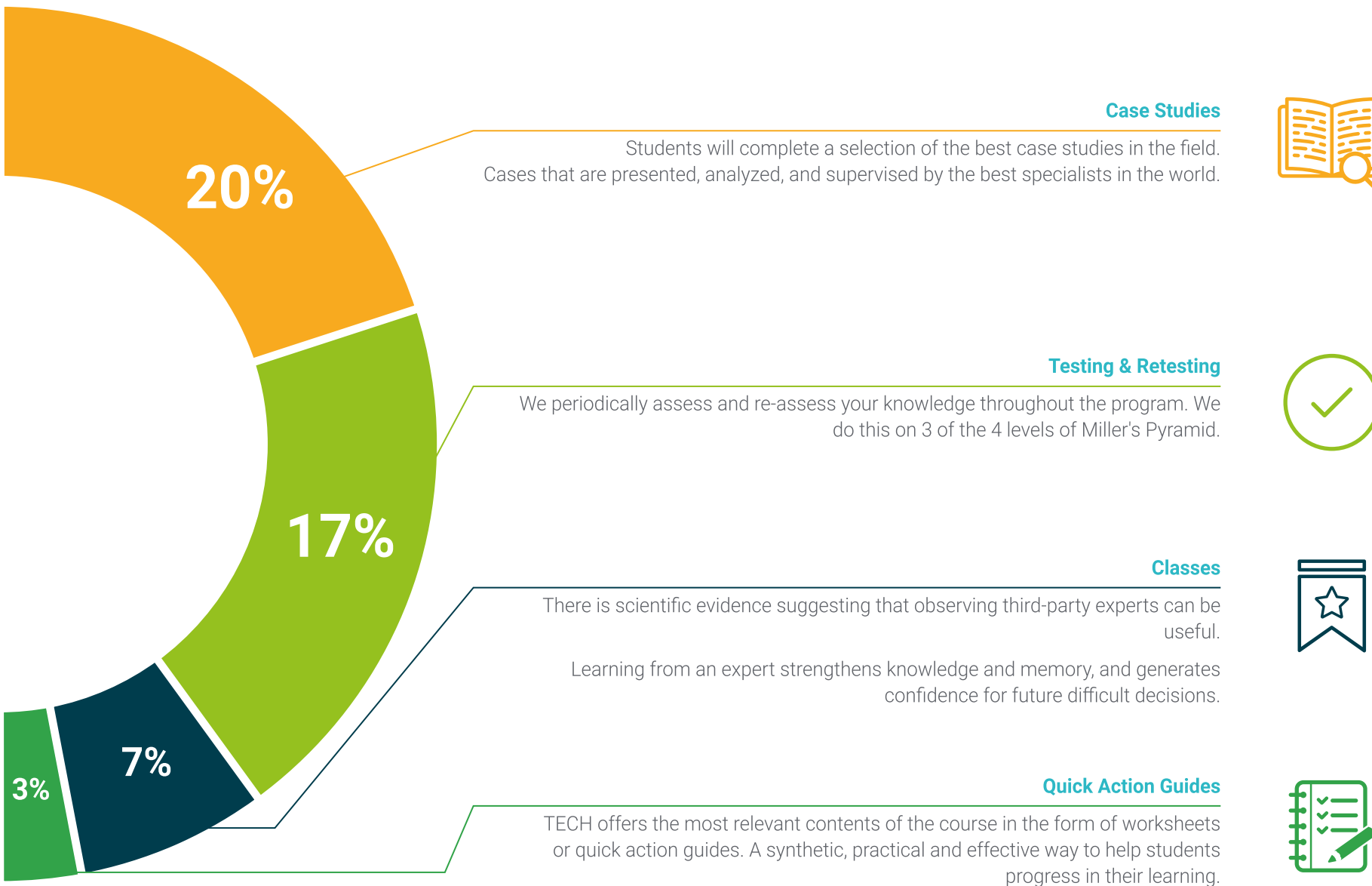
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





07

# Teaching Staff

The teaching staff is made up of a team of highly qualified professionals with extensive experience in the implementation and management of Agile Methodologies in real environments. Each member has a solid track record in the technology sector, which allows them to provide a comprehensive and up-to-date view of the challenges and best practices within agile programming. In addition, they are experts in various areas of Agile technology and project management, from Scrum Masters to Agile Coaches and Product Owners, ensuring that students receive comprehensive, practice-oriented education.





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*The teaching staff is a key pillar that ensures a quality educational experience. Their commitment to excellence, innovation and practical training will position you to master Agile Programming”*

## Management



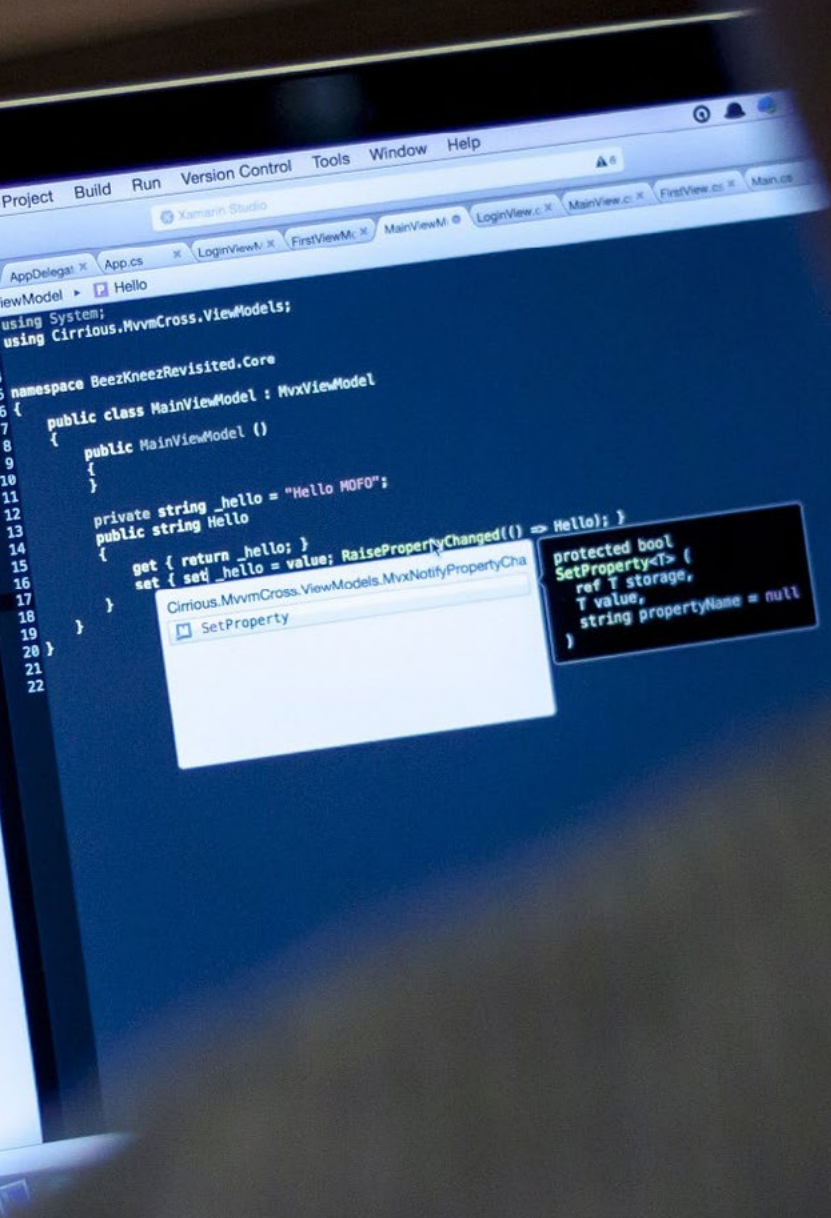
### **Dr. Lucas Cuesta, Juan Manuel**

- ♦ Senior Software Engineer and Analyst at Indizen – Believe in Talent
- ♦ Senior Software Engineer and Analyst at Krell Consulting and IMAGiNA Artificial Intelligence
- ♦ Software Engineer at Intel Corporation
- ♦ Software Engineer at Intelligent Dialog Systems
- ♦ PhD in Electronic Systems Engineering for Intelligent Environments from the Polytechnic University of Madrid
- ♦ Graduate in Telecommunications Engineering at the Polytechnic University of Madrid
- ♦ Master's Degree in Electronic Systems Engineering for Intelligent Environments from the Polytechnic University of Madrid



### **Mr. Márquez Ruiz de Lacanal, Juan Antonio**

- ♦ Software Developer at GTD Defense & Security Solutions
- ♦ Software Developer at Solera Inc
- ♦ Development and Research Engineer at GRVC Sevilla
- ♦ Co-founder of Unmute
- ♦ Co-founder of VR Educa
- ♦ Academic Exchange in Engineering and Entrepreneurship at the University of California, Berkeley
- ♦ Degree in Industrial Engineering from the University of Sevilla



## Professors

### Mr. Péris Millán, Eduardo

- ♦ Director of the Technological Consultancy Department
- ♦ Specialist in Computer Engineering
- ♦ Master's Degree in Strategic Management of Information and Knowledge in Organizations
- ♦ Master's Degree in Leadership and Public Management
- ♦ Expert in Public Management
- ♦ Expert in Computer Systems for Smart CITIES

### Mr. Pi Morell, Oriol

- ♦ Functional Analyst at Fihoca
- ♦ Hosting and Mail Product Owner CDMON
- ♦ Functional Analyst and Software Engineer at Atmira and CapGemini
- ♦ Teacher at ORACLE Forms CapGemini and Atmira
- ♦ Degree in Technical Engineering in Computer Management from the Autonomous University of Barcelona
- ♦ Master's Degree in Artificial Intelligence from the Catholic University of Avila
- ♦ Professional's Degree in Business Administration and Management by IMF Smart Education
- ♦ Master's Degree in Information of Systems Management by IMF Smart Education
- ♦ Postgraduate Degree in Design in Patterns from the Open University of Catalonia



# 08 Certificate

This Postgraduate Diploma in Agile Methodology Tools for Programming guarantees, in addition to the most rigorous and up-to-date program, access to an Postgraduate Diploma issued by TECH Global University.





“

*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 diploma for the **Postgraduate Diploma in Agile Methodology Tools for Programming** 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.

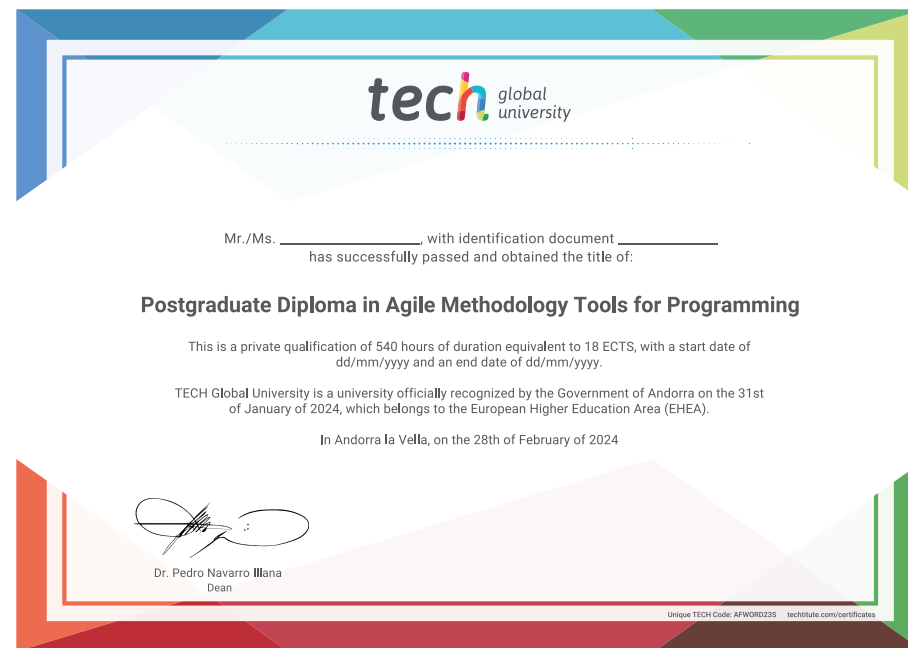
This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Agile Methodology Tools for Programming**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**







## Postgraduate Diploma Agile Methodology Tools for Programming

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

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