

# Hybrid Professional Master's Degree

## Web Application and Service Development



## Hybrid Professional Master's Degree

### Web Application and Service Development

Modality: Hybrid (Online + Internship)

Duration: 12 months

Certificate: TECH Global University

Credits: 60 + 4 ECTS credits

Website: [www.techtute.com/us/information-technology/hybrid-professional-master-degree/hybrid-professional-master-degree-web-application-service-development](http://www.techtute.com/us/information-technology/hybrid-professional-master-degree/hybrid-professional-master-degree-web-application-service-development)

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# 01

# Introduction

A recent study carried out by a well-known company forecasts an increase in the demand for experts specialized in the Development of Web Applications and Services. This is due to the fact that companies are seeking to position themselves on the Internet in order to interact directly with their customers. This facilitates both communication and customer service, which is beneficial for improving customer loyalty and retention. Given its importance, TECH presents a university degree that will delve into the latest innovations in the creation of Web Architectures.







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*With this Hybrid Professional Master's Degree  
you will develop skills to design high quality,  
scalable, secure and efficient web services”*

Web Application security has become a challenge for IT professionals due to the increasing number of cyber threats. This makes developers stay on top of the latest vulnerabilities affecting websites, among which SQL injections stand out. In the same vein, experts need to delve into the latest techniques to protect users' sensitive data and mitigate the risk of security breaches.

Against this backdrop, TECH is launching a revolutionary Hybrid Professional Master's Degree in Web Application and Service Development. It is a program that combines in 1,620 hours of the best theoretical content with 3 weeks of practical stay in a leading company in this field.

The curriculum will delve into aspects such as the development of the Back-End of Web Applications, User Management and the design of Secure Web Architectures. All this through teaching materials developed by the teaching staff itself, which include a variety of multimedia resources (such as interactive summaries, case studies or explanatory videos) for students to consolidate the contents in a dynamic way. Thanks to this, graduates will enjoy a totally progressive and natural learning process, without having to resort to costly techniques such as memorization.

It should be noted that the program includes practical training in a prestigious entity, where students will actively participate in the projects being developed at that time. At the same time, a specialized tutor will guide the students during the academic experience, guaranteeing the completion of a plan of activities that will allow them to improve their skills in an exponential way and based on the requirements of the current demand of the labor market.

This **Hybrid Professional Master's Degree in Web Application and Service Development** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of more than 100 case studies presented by IT specialist professionals
- ♦ Their graphic, schematic and practical contents provide essential information on those disciplines that are indispensable for professional practice
- ♦ A disruptive module on trends and future of Web Architectures
- ♦ Presentation of the most innovative techniques for testing and measuring the performance of web applications
- ♦ Special emphasis on the main User Authentication Protocols
- ♦ All of this will be complemented by 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
- ♦ Furthermore, you will be able to carry out an internship in one of the best Companies



*You will develop skills for the performance optimization of Web Applications, including server performance and resource load techniques"*

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*You will spend an intensive 3-week internship in a prestigious company, where you will acquire the skills you need to grow professionally"*

In this Master's proposal, of a professionalizing nature and blended learning modality, the program is aimed at updating IT professionals who offer solutions in the field of Web Application Development and Web Services. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate the theoretical knowledge in the IT practice, and the theoretical-practical elements will facilitate the updating of knowledge.

Thanks to its multimedia content elaborated with the latest educational technology, they will allow the IT professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to specialize 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 throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*This Hybrid Professional Master's Degree will include real cases to bring the development of the program as close as possible to the reality of IT practice.*

*You will have all the support of the largest online academic institution in the world, TECH, with the latest educational technology at your disposal.*



# 02

## Why Study this Hybrid Professional Master's Degree?

With the advance of new technologies, companies are seeking to reach a wider audience through the Internet. In this way, they increase their visibility and reach at an international level. In this context, the Development of Web Applications and Services is essential to offer more personalized experiences to customers, which promote brand loyalty. This is why TECH has created this pioneering degree, which combines the most recent update in areas such as Data Persistence Implementation with a practical stay in a highly prestigious entity. Therefore, graduates will obtain advanced skills to optimize their daily practice and offer high quality services.







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*You will master the language of Web Programming to develop high quality Web Applications and Services"*

### 1. Updating from the Latest Technology Available

Technology plays a fundamental role in the development of Web Applications and Services, as it provides computer scientists with advanced tools to improve the user experience. These tools also help automate processes, optimize performance and improve program scalability. In this way, companies increase both their operational efficiency and productivity. For this reason, TECH presents this Internship Program, where students will enter a working environment with the latest technology in the field of information technology.

### 2. Gaining In-depth Knowledge from the Experience of Top Specialists

Throughout the practical period, a team of professionals will accompany the students to get the most out of this academic experience. At the same time, they will transmit the most innovative techniques to create the most complete and accessible Web Architectures. Undoubtedly, this is a guarantee for the graduates, who will incorporate in their daily practice the most effective procedures in the field of Web Application and Service Development.

### 3. Entering First-Class Professional Environments

TECH's philosophy is based on providing university programs of the highest level. For this reason, TECH carefully selects all available centers for Internship Programs. Thanks to this effort, graduates will have access to a prestigious institution in the field of Web Application and Service Development. In this way, they will be able to experience the day-to-day of a demanding, rigorous and exhaustive area of work, always applying the latest techniques in their work methodology.







#### 4. Combining the Best Theory with State-of-the-Art Practice

The academic market is full of pedagogical programs that are limited exclusively to theoretical content. However, practice is a vital aspect for students to apply knowledge to real situations in order to develop practical skills. Aware of this, TECH offers a 100% practical learning model that will allow students to acquire practical experience and face the real challenges they may encounter in their professional careers.

#### 5. Expanding the Boundaries of Knowledge

TECH offers the opportunity to carry out this Hybrid Professional Master's Degree in centers of international scope. Thanks to this, specialists will be able to expand their frontiers and catch up with the best professionals, who work in first class companies. A unique opportunity that only TECH, the world's largest digital university, can offer.



*You will have full practical immersion at the center of your choice"*

# 03 Objectives

Through this Hybrid Professional Master's Degree, graduates will be characterized by having a comprehensive view of the fundamentals and methodologies used in both Web Application and Service Development. In tune with this, computer scientists will be familiar with the latest trends in this area, including databases, APIs and development tools. Therefore, developers will manage innovative Web Development projects and will be prepared to take a leap in their career path.







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*This university degree offers you the opportunity to expand your knowledge in a real scenario, with the maximum scientific rigor of an institution at the forefront of technology"*



## General Objective

- This Hybrid Professional Master's Degree in Web Application and Service Development will provide computer scientists with the necessary technical skills to design, deploy and maintain high quality Web Applications and Web Services. In this way, graduates will effectively handle innovative tools such as programming languages, frameworks, databases and cloud services. Thanks to this, developers will be able to design user interfaces and implement security measures



*This university degree offers you the opportunity to expand your knowledge in a real scenario, with the maximum scientific rigor of an institution at the forefront of technology"*





## Specific Objectives

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### Module 1. Advanced Web Architecture

- ◆ Determine components and layers of web architectures
- ◆ Identify the main web communication protocols
- ◆ Examine the different types and patterns of web architectures
- ◆ Delve into the design of web architectures following good practices
- ◆ Assimilate the processes of continuous improvement and evolution of web architectures
- ◆ Analyze real web application and service architectures for reference

### Module 2. Front-End Development in Web Applications

- ◆ Examine front-end development technologies and patterns
- ◆ Establish how client-server communication works
- ◆ Determine the options for managing the state of a web application
- ◆ Analyze the user interface development process
- ◆ Design advanced user experiences with multi-platform support
- ◆ Identify and solve front-end performance issues

### Module 3. Back-End Application Development

- ◆ Examine back-end development technologies and patterns
- ◆ Develop application interfaces (APIs) of various types
- ◆ Analyze integration mechanisms, such as message and event queues
- ◆ Establish the steps to deploy and run applications on the back end
- ◆ Identify and resolve back-end performance issues
- ◆ Examine the latest trends in application development

### Module 4. Design and Implementation of Data Persistence

- ◆ Examine the various options for persisting web application data
- ◆ Analyze the use of relational and non-relational databases
- ◆ Develop other types of databases
- ◆ Generate specialized knowledge of file storage use cases and tools
- ◆ Establish the motivations and solutions for search engines
- ◆ Develop advanced architectures for processing large amounts of data

### Module 5. User Management in Web Applications

- ◆ Examine the processes of registration, authentication and authorization of web users
- ◆ Specify the management of user roles and credentials
- ◆ Identify mechanisms for user session management
- ◆ Develop the systems available for communicating with users

### Module 6. Web Project Management and Organization

- ◆ Analyze the web application development process and its methodologies
- ◆ Examine the DevOps working model and its implications
- ◆ Develop mechanisms and solutions for code version control
- ◆ Formalize the process of integration and continuous deployment of applications
- ◆ Establish the tasks of quality control and maintenance of the application
- ◆ Delve into the cost and release management in the web project



### Module 7. Web Application Security

- ◆ Review data encryption mechanisms and web certificates
- ◆ Identify, prevent and mitigate the main types of web attacks
- ◆ Determine the types of bots and protection mechanisms in place
- ◆ Examine the main web security tools and services

### Module 8. Web Application Observability and Resilience

- ◆ Incorporate aspects of resilience and observability in development
- ◆ Manage the components of observability: logs, traces and metrics
- ◆ Discover mechanisms to ensure performance and high availability
- ◆ Assimilate Chaos Engineering strategies to train and prepare teams

### Module 9. Web Applications and Services in the Cloud

- ◆ Analyze the use cases and options for cloud computing
- ◆ Develop the common serverless computing model in these types of deployments
- ◆ Examine and compare leading cloud service providers
- ◆ Determine strategies and recommendations for migration to the cloud
- ◆ Identify and apply cost optimization mechanisms in the cloud
- ◆ Incorporate cloud work into the team and the enterprise





### Module 10. Building an Advanced Web Application

- ◆ Practice the complete process of developing a web application
- ◆ Analyze requirements and make technological and managerial decisions
- ◆ Set up a development platform that can also be used for future projects
- ◆ Discover, through trial and error, the challenges of real work with web applications
- ◆ Validate the advantages of resiliency and observability-oriented design
- ◆ Monitor and maintain a real application

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*The goal of TECH is you: give a boost to your career and stand out in a very relevant field for companies”*

# 04 Skills

Upon completion of this university program, computer scientists will have advanced project management skills, including programming and controlling using software development methodologies. In this regard, developers will set up web applications in production environments, using cloud hosting services and deployment automation tools.



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*You will implement the most effective security measures to protect web applications against common threats and vulnerabilities"*



## General Skills

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- ◆ Develop the skills necessary to design and evolve advanced web architectures
- ◆ Design and implement backup and recovery policies
- ◆ Create a robust framework for developing, deploying and maintaining web applications
- ◆ Create, step-by-step, a modern web application in which design, development, management and other best practices criteria will be applied







## Specific Skills

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- ◆ Apply caching mechanisms to improve performance
- ◆ Analyze different approaches to user data isolation
- ◆ Manage application infrastructure using code
- ◆ Analyze security policies and practices applicable across the team and enterprise
- ◆ Plan and respond to disaster scenarios
- ◆ Evaluate cloud services for free



*You will design, implement and manage databases to store information in applications using technologies such as Firebase"*

# 05

# Course Management

For the design and delivery of this Hybrid Professional Master's Degree, TECH brings together a teaching staff made up of professionals in the field of Web Application and Service Development. These experts have an extensive professional background, in which they have developed multiple innovative solutions for prestigious entities. In their commitment to provide the best services, they remain at the forefront of all the advances that occur in their field of specialization. Thanks to this, students will enjoy dynamic materials of high quality and full applicability in the labor market.





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*The teachers of this Hybrid Professional Master's Degree will provide you with the most innovative techniques in Web Application Front-End Development"*



## Management



### Dr. García del Valle, Eduardo Pantaleón

- 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 Telefónica
- Organization and delivery of technical webinars online 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
- Degree in Telecommunications Engineering from the Carlos III University of Madrid
- PhD in Computers, Software and Systems from the Polytechnic University of Madrid
- Master's Degree in Computer System and Administration from the National University of Distance Education- UNED
- Executive Data Science Specialization by Johns Hopkins University



## Professors

### Mr. López Mendoza, Marvin Roberto

- ◆ Computers Systems Engineer
- ◆ Senior Agile Coach, Manager Projects and Agile Chapter Lead at Cognizant
- ◆ Senior IT Consultant, Scrum Master, Tech Evangelist in Minsait
- ◆ QA Lead, Senior Team Lead and Scrum Master in Control Risks
- ◆ Senior QA Engineer at Smartmatic
- ◆ Head of IT Projects at Blom Geospatial Systems
- ◆ Computer Systems Engineer from the Technological University of Panama
- ◆ Master in Agile Product, Business, and Technology Management from IEBS
- ◆ Master in Formulation and Evaluation of Investment Projects at the Latin University of Panama

### Mr. Utrilla Utrilla, Rubén

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

### Mr. Orbezo Gutiérrez, Alberto

- ◆ Senior Software Developer at Babel
- ◆ Programmer and analyst at Álamo Consulting
- ◆ IT Consultant

### Ms. Cupas Pitti, Carol Sugeili

- ◆ Project Coordinator at Cognizant
- ◆ Technology Articles Writer at OpenWebinars
- ◆ Data Analyst at NVIA
- ◆ Project Manager eDiscovery at Risk Control
- ◆ Associate Director of Operations at Risk Control
- ◆ QA Manager at Risk Control
- ◆ Business Intelligence Architect at BICSA
- ◆ Senior Systems Analyst at HSBC
- ◆ Support Analyst at Ultimus
- ◆ Computer Engineer at Panamerican Semiconductors Inc
- ◆ Degree in Computer Systems Engineering from the Technological University of Panama
- ◆ Postgraduate Degree in Senior Management at the Latin University of Panama
- ◆ Master's Degree in Business Administration with emphasis in Business Management from Latin University of Panama
- ◆ Master in Big Data and Business Intelligence from Next International Business School

### Ms. Portalatín Romero, Isabel

- ◆ IT Engineer
- ◆ Responsible for offers in the area of Informatics to different Public and Private Organizations
- ◆ Online teacher in different Professional Training programs
- ◆ Technical Engineering in Computer Management by the School University of Extremadura Polytechnic of Informatics

**Dr. López Rodríguez, Armando**

- ◆ Technical Consultancy Area Head in the Office of the President of Puertos del Estado
- ◆ Head of Strategic Planning Area in Puertos del Estado
- ◆ Project Manager at Puertos del Estado
- ◆ Head of the Resources and Information and Communications Technology Area at Puertos del Estado
- ◆ Head of the Development Area in Puertos del Estado
- ◆ Head of Corporate Relations Area in Puertos del Estado
- ◆ Head of Strategic Planning Area in Puertos del Estado
- ◆ Associate Professor at the School of Industrial Organization
- ◆ AENOR Associate Professor
- ◆ Associate Professor at UBT Lab
- ◆ Telecommunications Engineer from Universidad Politécnica de Madrid
- ◆ Degree in History from the National University of Distance Education (UNED)
- ◆ PhD in History from the National University of Distance Education (UNED)
- ◆ Master's Degree in Advanced Methods and Techniques of Historical, Artistic and Geographical Research from the National University of Distance Education (UNED)
- ◆ Postgraduate Certificate in Management Development Program (PDD) from the IESE of the University of Navarra





**Mr. Ruiz Espinoza, Óscar Alexis**

- ◆ Cloud Cybersecurity Architect at Inside Security
- ◆ IT Security Specialist at WOM
- ◆ Telefónica's Level 2 Application Incident Manager at Intelidata
- ◆ IT Infrastructure Administrator and Incident Manager at Soluciones Orion
- ◆ Incident manager of web applications, cellular and fixed network at Movilnet
- ◆ Incident manager of Mobile First Line Support at Cotrónica C.A.
- ◆ Computer Engineer at the Alejandro de Humboldt University of Venezuela
- ◆ Postgraduate Certificate in Cybersecurity at Universidad de Santiago de Chile

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*You will be advised at all times by the teaching team, made up of professionals with extensive experience in Web Application and Service Development"*

# 06

## Educational Plan

The curriculum of this Hybrid Professional Master's Degree is designed to address in detail the tools that IT professionals must handle to develop successful Web Applications and Web Services. Composed of 10 complete modules, the syllabus will analyze issues ranging from the specificities of Advanced Web Architectures to the steps for building an advanced web application. In addition, the academic itinerary will include a disruptive topic on the trends and future of web frameworks, with the aim of enabling graduates to develop highly innovative solutions to stand out in the job market.







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*You will design attractive, functional and intuitive User Interfaces to improve the consumer experience”*

## Module 1. Advanced Web Architecture

- 1.1. Advanced Web Architecture
  - 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. Components on the Customer Side
  - 1.2.2. Network Components
  - 1.2.3. Components on the Server Side
- 1.3. Communication Protocols in Web Architecture
  - 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 Web Architecture
  - 1.4.1. Presentation Layer
  - 1.4.2. Application Layer
  - 1.4.3. Data Layer
- 1.5. Types of Web Architecture
  - 1.5.1. Monolithic Architectures
  - 1.5.2. Micro-Services 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 Presented (MVP)
  - 1.6.3. Model View- View - Models (MVVM)
- 1.7. Good Practices in Web Architectures
  - 1.7.1. Safety and Testing by Design
  - 1.7.2. Scalability and Resilience
  - 1.7.3. Reusability, Extensibility and Integrability
- 1.8. Design of Web Architecture
  - 1.8.1. Business Requirements Analysis
  - 1.8.2. Types of Diagrams and Tools
  - 1.8.3. Documentation

- 1.9. Web Architecture Evolution
  - 1.9.1. Continuous Improvement Process
  - 1.9.2. Integration with Third Parties
  - 1.9.3. Support and Maintenance of Legacy Systems
- 1.10. Reference Web Architectures
  - 1.10.1. Static and Dynamic Websites
  - 1.10.2. e-Commerce Service
  - 1.10.3. Streaming Platform

## Module 2. Front-End Development in Web Applications

- 2.1. Front-End Web Application Development Technologies
  - 2.1.1. HTML5
  - 2.1.2. CSS
  - 2.1.3. DOM and JavaScript
- 2.2. Front-end Development Patterns
  - 2.2.1. Multiple Page Applications
  - 2.2.2. Single Page Applications
  - 2.2.3. Progressive Web Applications
- 2.3. Development of User Interfaces (UI) in Web Applications
  - 2.3.1. Frameworks and Front-end Development Tools
  - 2.3.2. Separation of Responsibilities
  - 2.3.3. Component-Oriented Architectures
- 2.4. Client-Server Communication
  - 2.4.1. Request Flow
  - 2.4.2. Synchronous Communication
  - 2.4.3. Asynchronous Communication
- 2.5. Status Control in Web Applications
  - 2.5.1. Global and Shared State in Web Applications
  - 2.5.2. State Management Patterns (Redux, MobX, Recoil)
  - 2.5.3. Use Cases and Recommendations
- 2.6. User Experience (UX) in Web Applications
  - 2.6.1. User-Centered Design
  - 2.6.2. Information Architecture
  - 2.6.3. Design and Prototyping Tools

- 2.7. Web Accessibility
  - 2.7.1. Web Accessibility Standards and Regulations (ADA, WCAG, European Accessibility Act)
  - 2.7.2. Accessible Rich Internet Applications (ARIA)
  - 2.7.3. Web Accessibility Tools
- 2.8. Multi-Platform Support
  - 2.8.1. Mobile First and Responsive Design
  - 2.8.2. Native Development Tools
  - 2.8.3. Hybrid Development Tools
- 2.9. Translation and Internationalization
  - 2.9.1. Language Management
  - 2.9.2. Character Codification
  - 2.9.3. Regional Formats
- 2.10. Front-End Optimization and Performance
  - 2.10.1. Load Optimization Techniques
  - 2.10.2. Lazy and Deferred Loading of Resources
  - 2.10.3. Tools for Testing and Performance Measurement

### Module 3. Back-End Application Development

- 3.1. Back-End Development Technologies
  - 3.1.1. Programming Languages
  - 3.1.2. Frameworks and Libraries
  - 3.1.3. Dependency Management
- 3.2. Back-End Development Patterns
  - 3.2.1. SOLID
  - 3.2.2. Microservices
  - 3.2.3. API-first
- 3.3. Development of REST Application Programming Interfaces (APIs)
  - 3.3.1. Statefulness and Statelessness
  - 3.3.2. HTTP Methods and Responses
  - 3.3.3. Pagination, Documentation and Versioning

- 3.4. Other Types of APIs
  - 3.4.1. GraphQL
  - 3.4.2. Websockets
  - 3.4.3. gRPC
- 3.5. Message Queuing
  - 3.5.1. Message Queuing
  - 3.5.2. Patterns and Case Uses
  - 3.5.3. Available Solutions
- 3.6. Event-Driven Architectures
  - 3.6.1. Event-Driven Architectures
  - 3.6.2. Event Flow Layers
  - 3.6.3. Patterns and Case Uses
- 3.7. Application Development with Containers
  - 3.7.1. Containers
  - 3.7.2. Development and Deployment with Containers
  - 3.7.3. Container Management Tools
- 3.8. Deployment and Execution of Back-End Applications
  - 3.8.1. Packaging
  - 3.8.2. Web Servers
  - 3.8.3. Application Servers
- 3.9. Back-End Optimization and Performance
  - 3.9.1. Scalability and Load Balancing
  - 3.9.2. Request Limiting and Asynchronous Processing
  - 3.9.3. Performance Measurement and Testing Tools
- 3.10. Web Application Development Trends
  - 3.10.1. Generating Applications with Low-Code and No-Code Systems
  - 3.10.2. Development Assistance through Generative AI Github Copilot
  - 3.10.3. Gartner Hype CycleGartner Hype

## Module 4. Design and Implementation of Data Persistence

- 4.1. Data Storage Solutions
  - 4.1.1. CRUD, ACID, OLTP, OLAP
  - 4.1.2. Data Modeling
  - 4.1.3. Data Storage System Classifications
- 4.2. Relational Databases
  - 4.2.1. Case Uses
  - 4.2.2. Operations with Relational Databases
  - 4.2.3. Available Solutions
- 4.3. Non-Relational Databases
  - 4.3.1. Key-Value Databases
  - 4.3.2. Object-Oriented Databases
  - 4.3.3. Graph-Oriented Databases
- 4.4. Other Systems of Databases
  - 4.4.1. Memory Database
  - 4.4.2. Time Series Databases
  - 4.4.3. Distributed Databases
- 4.5. File System Storage
  - 4.5.1. Case Uses
  - 4.5.2. File System Operations
  - 4.5.3. Available Solutions
- 4.6. Data Cache Mechanisms
  - 4.6.1. Client-Side Cache
  - 4.6.2. Network Caching (CDN)
  - 4.6.3. Server-Side Cache
- 4.7. Search Engines
  - 4.7.1. Case Uses
  - 4.7.2. Indexing and Searching
  - 4.7.3. Available Solutions
- 4.8. Data Access Mechanisms
  - 4.8.1. Data Access Object (DAO) and Data Transfer Object (DTO)
  - 4.8.2. Access Control
  - 4.8.3. Drivers





- 4.9. Big Data Architecture
  - 4.9.1. Extraction, Loading and Transformation (ETL)
  - 4.9.2. Data Warehouses, Datalakes and Data Lakehouses
  - 4.9.3. Available Solutions
- 4.10. Criteria for Storage Selection
  - 4.10.1. Functional Requirements
  - 4.10.2. Non-Functional Requirements
  - 4.10.3. Other Key Aspects

## Module 5. User Management in Web Applications

- 5.1. User Records and Authentication
  - 5.1.1. Identity validation and MFA
  - 5.1.2. Authentication Protocols OAuth 2.0, SAML, LDAP, RADIUS
  - 5.1.3. Identity Providers
- 5.2. Profiles, Roles and User Authorization
  - 5.2.1. Authorization Mechanisms
  - 5.2.2. Role-Based Access (RBAC)
  - 5.2.3. Principle of Least Privilege
- 5.3. Credential Management
  - 5.3.1. Encryption and Secure Storage of Passwords
  - 5.3.2. Modification and Revocation of Credentials
  - 5.3.3. Password Tools and Services
- 5.4. User Session Management
  - 5.4.1. Session Identifier, Properties and Lifecycle
  - 5.4.2. Session Control Implementations
  - 5.4.3. Cookies and Web Storage
- 5.5. Isolation of User Data
  - 5.5.1. Single-Tenant and Multi-Tenant Systems
  - 5.5.2. Physical Data Isolation (Silos)
  - 5.5.3. Logical Data Isolation (Pools)
- 5.6. Notifications and Messaging
  - 5.6.1. Notifications in the Application
  - 5.6.2. Notification Services: Email, SMS, Push Notifications
  - 5.6.3. Subscription Management

- 5.7. Personalized User Experiences
  - 5.7.1. User Segmentation
  - 5.7.2. Recommendation Mechanisms
  - 5.7.3. A/B Testing
- 5.8. User Monitoring and Analytics
  - 5.8.1. Forms of Analysis: Behavioral, Customer Journey, Funnel Analysis
  - 5.8.2. Web Monitoring and Analysis Tools: Google Analytics and Others
  - 5.8.3. Multi-Platform Tracking: E-mail, Mobile Devices
- 5.9. Monetization of Web Applications
  - 5.9.1. Search Optimization
  - 5.9.2. Digital Marketing Campaigns
  - 5.9.3. E-Commerce and Payment Gateways
- 5.10. Protection of Personal Data
  - 5.10.1. Scope of Data Protection
  - 5.10.2. International Data Protection Regulations
  - 5.10.3. Recommendations and Best Practices

## Module 6. Web Project Management and Organization

- 6.1. Process for Web Application Development
  - 6.1.1. Phases in the Research Process
  - 6.1.2. Roles and Organization in Web Development Projects
  - 6.1.3. Collaborative Web Development
- 6.2. Methodologies for Collaborative Development
  - 6.2.1. Agile Values and Principles
  - 6.2.2. Comparing Agile Methodologies: Scrum and Kanban
  - 6.2.3. Web Project Management Tools
- 6.3. Development and Operation Work Model (DevOps)
  - 6.3.1. Responsibilities
  - 6.3.2. Adoption of a DevOps Working Model
  - 6.3.3. Other Approaches: DevSecOps, DataOps, MLOps

- 6.4. Version Control
  - 6.4.1. Version Control Benefits
  - 6.4.2. Version Control with Git
  - 6.4.3. Version Control Solutions: Github, Gitlab
- 6.5. Infrastructure as Code (IaaS)
  - 6.5.1. Infrastructures as Code (IaaS)
  - 6.5.2. Infrastructure Management Patterns
  - 6.5.3. IaaS tools and frameworks: Terraform
- 6.6. Continuous Integration and Deployment (CI/CD)
  - 6.6.1. Integration Strategies
  - 6.6.2. Deployment and Rollback Strategies
  - 6.6.3. Solutions for CI/CD Pipelines
- 6.7. Quality Control
  - 6.7.1. Test Planning
  - 6.7.2. Types of Tests
  - 6.7.3. Automation and Execution of Tests
- 6.8. Incident Maintenance and Resolution
  - 6.8.1. Service Level Objectives (SLOs) and Service Level Indicators (SLIs)
  - 6.8.2. Incident Management and Post-Incident Analysis
  - 6.8.3. Incidence Management Tools
- 6.9. Cost Management in Web Projects
  - 6.9.1. Cost Factors in Web Projects: Infrastructure, Development, Operations
  - 6.9.2. Cost Estimation
  - 6.9.3. Costs Control and Optimization
- 6.10. Releases Management in Web Projects
  - 6.10.1. Pre-Release Phases: MVP, Alfa, Beta
  - 6.10.2. Planning for Start-Up in Production
  - 6.10.3. Generation of New Versions and Compatibilities

## Module 7. Web Application Security

- 7.1. Secure Web Architecture Design
  - 7.1.1. Customer Security
  - 7.1.2. Network Security
  - 7.1.3. Software Security
- 7.2. Encryption
  - 7.2.1. Encryption Techniques
  - 7.2.2. Encryption in Transit
  - 7.2.3. Encryption at Rest
- 7.3. Web Certificates
  - 7.3.1. Types of Web Certificates
  - 7.3.2. Web Certificate Generation and Storage
  - 7.3.3. Certification Authorities
- 7.4. Major Cyber Web Attacks
  - 7.4.1. Open Worldwide Application Security Project (OWASP) Top 10
  - 7.4.2. Injection Attacks
  - 7.4.3. Denial of Service Attacks
- 7.5. Other Types of Attacks
  - 7.5.1. Software Attacks: Malware, Ransomware
  - 7.5.2. Impersonation and Social Engineering Attacks: Phishing, Spoofing
  - 7.5.3. Exploiting Vulnerabilities: Supply Chain, Zero-Day Exploit
- 7.6. Protection against Bots
  - 7.6.1. Types of Bots
  - 7.6.2. Algorithm Detention
  - 7.6.3. Challenges for Bots: CAPTCHA, Image Recognition.
- 7.7. Web Security Tools and Services
  - 7.7.1. Prevention
  - 7.7.2. Detection
  - 7.7.3. Mitigation

- 7.8. International Safety Recommendations and Regulations in the Web Industry
  - 7.8.1. ISO 27001
  - 7.8.2. Regional Regulations: NIS2, NIST
  - 7.8.3. Industry Regulations: PCI, HIPAA
- 7.9. Security Policies
  - 7.9.1. Roles of Security in Development Teams
  - 7.9.2. Secure Development Practices
  - 7.9.3. Incident Response: Training and Automation
- 7.10. Safety Testing
  - 7.10.1. Vulnerability Analysis
  - 7.10.2. Penetration Test
  - 7.10.3. Security Audits

## Module 8. Web Application Observability and Resilience

- 8.1. Site Reliability Engineering (SRE)
  - 8.1.1. Development of Observable and Resilient Applications
  - 8.1.2. Capacity Planning
  - 8.1.3. SRE and DevOps Collaboration
- 8.2. Application Registrations
  - 8.2.1. Log Levels and Structures
  - 8.2.2. Log Storage and Analysis
  - 8.2.3. Logging Frameworks and Tools
- 8.3. Request Traces
  - 8.3.1. Application Instrumentation
  - 8.3.2. End-to-End Traceability: Trace ID
  - 8.3.3. Frameworks and Tools for Traces

- 8.4. Metrics Monitoring
  - 8.4.1. Types of Metrics
  - 8.4.2. Metrics Storage and Analysis
  - 8.4.3. Frameworks and Tools for Metrics
- 8.5. Incident Response
  - 8.5.1. Alerts and Notifications
  - 8.5.2. Dashboards and Reports
  - 8.5.3. Process Automation
- 8.6. Fault Tolerant Application Design
  - 8.6.1. Detection of Failure Points and Health-Checks
  - 8.6.2. Detection of Failure Points and Health-Checks
  - 8.6.3. Graceful Degradation
- 8.7. High Availability Architectures
  - 8.7.1. Load Balancing
  - 8.7.2. Horizontal and Vertical Scalability
  - 8.7.3. Downtime-Free Upgrades
- 8.8. Data Backup and Recovery
  - 8.8.1. Data Backup and Retention Policies
  - 8.8.2. Backup Mechanisms
  - 8.8.3. Recovery Options
- 8.9. Disaster Planning and Recovery
  - 8.9.1. Disaster Planning: RTO and RPO
  - 8.9.2. Disaster Recovery Strategies
  - 8.9.3. Disaster Recovery Tools
- 8.10. Chaos Engineering
  - 8.10.1. Failure Testing
  - 8.10.2. Safety and Isolation Mechanisms
  - 8.10.3. Tools and Frameworks for Failure Testing

## Module 9. Web Applications and Services in the Cloud

- 9.1. Web Architectures in the Cloud
  - 9.1.1. Cloud Computing
  - 9.1.2. Security and Compliance in the Cloud
  - 9.1.3. Providers and Modalities (IaaS, PaaS, SaaS)
- 9.2. Deployment Models of Web Applications in the Cloud
  - 9.2.1. Public and Private Clouds
  - 9.2.2. Multi-Cloud and Hybrid Models
  - 9.2.3. Edge Computing
- 9.3. Serverless Computing
  - 9.3.1. Case Uses
  - 9.3.2. Serverless Application Design
  - 9.3.3. Functions as a Service (FaaS)
- 9.4. Amazon Web Services
  - 9.4.1. Main Customer and Services
  - 9.4.2. Regional and Global Availability
  - 9.4.3. Free Offer
- 9.5. Microsoft Azure
  - 9.5.1. Main Customers and Services
  - 9.5.2. Regional and Global Availability
  - 9.5.3. Free Offer
- 9.6. Google Cloud Platform
  - 9.6.1. Main Customers and Services
  - 9.6.2. Regional and Global Availability
  - 9.6.3. Free Offer
- 9.7. Other Providers and Platforms for Web Services and Applications in the Cloud
  - 9.7.1. IBM Cloud
  - 9.7.2. Oracle Cloud
  - 9.7.3. Web Hosting: Heroku, Firebase, Cloudflare



- 9.8. Migration to the Cloud
  - 9.8.1. Migration Strategies: 7R's Models
  - 9.8.2. Migration Planning and Phases
  - 9.8.3. Migration Tools
- 9.9. Cost Optimization in the Cloud
  - 9.9.1. Cost Monitoring
  - 9.9.2. Sizing of Resources
  - 9.9.3. Discount Plans
- 9.10. Cloud Application Management
  - 9.10.1. Deployment Model and Vendor Selection Criteria
  - 9.10.2. Training and Certification
  - 9.10.3. Integration into the Organization of the Company Cloud Center of Excellence (CCoE)

## Module 10. Building an Advanced Web Application

- 10.1. The Application
  - 10.1.1. Application Presentation
  - 10.1.2. Requirements
  - 10.1.3. Stakeholders
- 10.2. Planning and Design
  - 10.2.1. Methodology Choice
  - 10.2.2. Development and Training Plans:
  - 10.2.3. Designing the Architecture:
- 10.3. Settings of the Development Platform
  - 10.3.1. Development Platform Choice
  - 10.3.2. Environment Configuration
  - 10.3.3. Version Control Systems
- 10.4. Front-End Development
  - 10.4.1. Technology Choice
  - 10.4.2. Implementation
  - 10.4.3. Unit Tests

- 10.5. Back-End Development
  - 10.5.1. Technology Choice
  - 10.5.2. Implementation
  - 10.5.3. Unit Tests
- 10.6. Data Storage Implementation
  - 10.6.1. Technology Choice
  - 10.6.2. Data Models
  - 10.6.3. Implementation
- 10.7. User Management and Security/Safety
  - 10.7.1. User Management Models
  - 10.7.2. Implementation
  - 10.7.3. Application of Security Policies
- 10.8. Continuous Integration and Deployments
  - 10.8.1. Integration Test Plan
  - 10.8.2. Creation of a CI/CD Pipeline
  - 10.8.3. Deployment of the Application with IaaS
- 10.9. Maintenance Tasks
  - 10.9.1. Application Monitoring: Costs, Resource Consumption, etc.
  - 10.9.2. Incident Response
  - 10.9.3. Deployment of an Application Fix
- 10.10. Application Evolution
  - 10.10.1. Business Data Analysis
  - 10.10.2. Improvements
  - 10.10.3. Planning and Deployment of New Versions



*You will develop problem-solving skills to overcome technical challenges during Web Application and Service Development"*

07

# Clinical Internship

Once the online theoretical stage has been passed, the academic itinerary includes a practical training phase in a reference institution. During this period, graduates will be supported by a tutor who will ensure compliance with the requirements for which this program has been designed. This expert will also provide students with individualized advice according to their needs, which will guarantee the success of their learning process.



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*You will carry out your internship in a reputable institution, equipped with the most cutting-edge technological tools to facilitate the performance of your work"*

The Internship Program's Internship Program consists of a 3-week stay in a prestigious institution of the sector, from Monday to Friday, with 8 consecutive hours of practical training with an assistant specialist. Thanks to this experience, graduates will have access to a real work environment where they will join a team of professionals to carry out tasks such as the design of Web Architectures.

During this program, of a completely practical nature, the activities are oriented towards the development and improvement of the necessary skills for the provision of web services. In this way, students will acquire new skills to exercise their professional activity with maximum efficiency and provide their clients with highly innovative proposals.

Undoubtedly, students are facing a unique academic proposal to raise their professional horizons to a higher level. To this end, they will have access to a top-quality work environment, equipped with the most cutting-edge technological tools for the development of their different tasks.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the praxis of Development of Web Applications and Services (learning to learn and learning to do). of Web Applications and Services (learning to be and learning to relate).





The procedures described below will be the basis of the practical part of the training, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:

Module	Practical Activity
<b>User Interface Design</b>	Elaborate visual elements such as buttons, menus, forms and other components of front-end development
	Create the basic structure of the web page using HTML, defining the hierarchy and layout of the elements
	Develop interactive functionalities such as animations, scrolling effects or form validations
	Perform testing to ensure that the user interface works correctly on different web browsers and devices
<b>Data Persistence Management</b>	Generate the structure and relationships of the information to be stored in the database
	Select the most appropriate storage technology for the application's needs
	Configure the data access layers that allow the application to interact with the database
	Implement transaction control mechanisms to ensure data consistency and data integration during write operations
<b>User and Session Control</b>	Verify the identity of users through login credentials, such as username and passwords
	Define roles for users and allow them to have appropriate access to application functionality according to their authorization level
	Create a mechanism for users to reset their passwords in case of forgetting them
	Monitor user activities within the application in order to detect anomalous behavior or identify usage trends

Module	Practical Activity
<b>Web Architecture Security</b>	Assess potential vulnerabilities and threats to web application security, taking into account both the operational context and critical assets
	Conduct controlled penetration tests to simulate hacker attacks and measure the application's resistance to intrusions
	Implement encryption techniques to protect the sensitivity of sensitive data during storage and transmission
	Properly tune the web server and its components to mitigate security risks such as malicious code execution
<b>Cloud Solutions</b>	Design web applications that take advantage of cloud benefits, such as scalability or global availability
	Transfer existing applications to cloud environments to take full advantage of elasticity and cost reductions
	Deploy services in the cloud using deployment platforms and automation tools
	Execute data backup and recovery strategies to protect against data loss



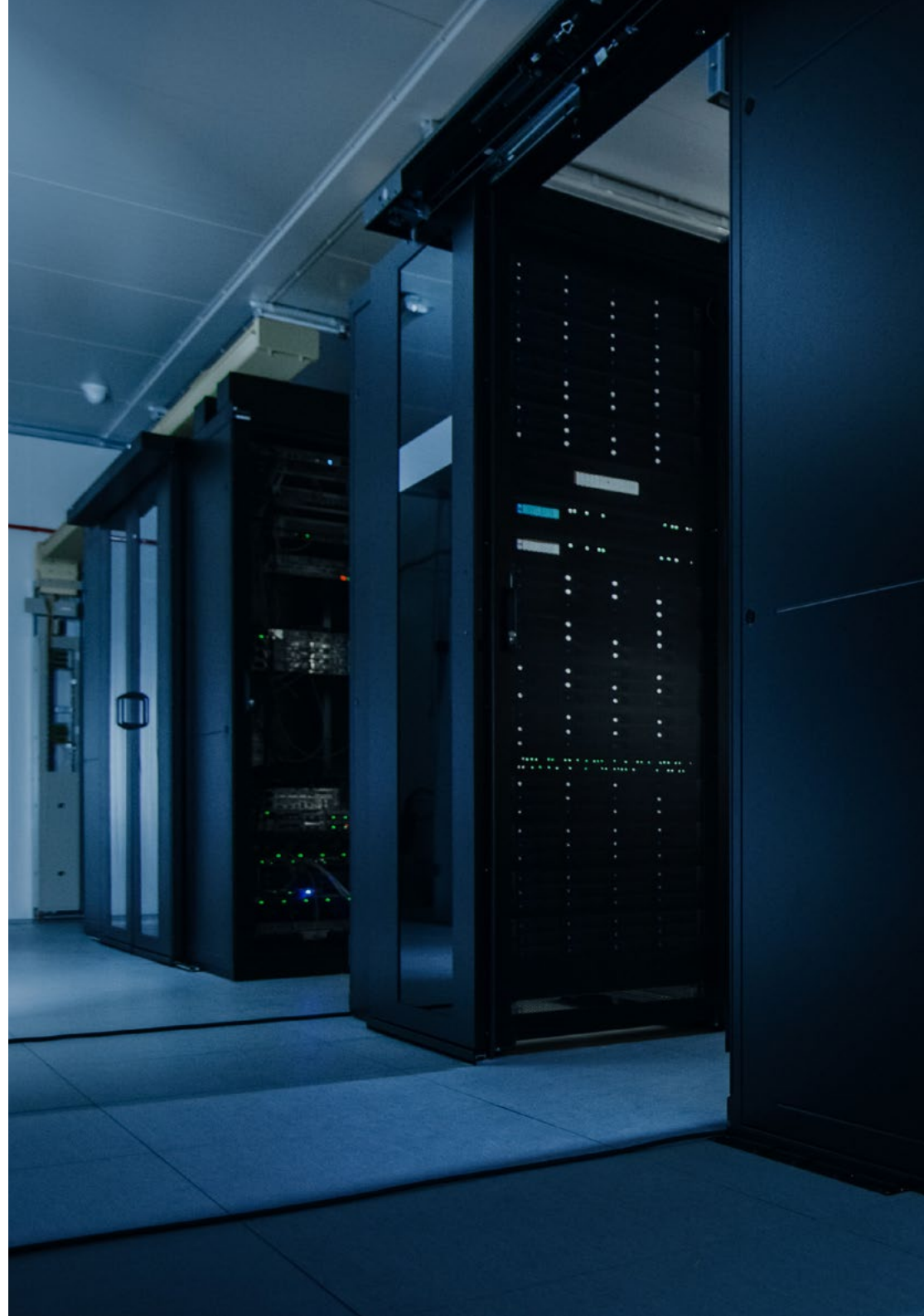
*TECH has the most complete and up-to-date program on the market for you to achieve educational and, therefore, professional excellence"*

## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the Internship Program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship program agreement shall be as follows:

**1. TUTOR:** During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.



# 08

## Where Can I Do the Internship?

This Hybrid Professional Master's Degree includes in its itinerary a practical stay in a prestigious institution, where students will be able to put into practice everything they have learned in the field of Web Application and Service Development. In this sense, TECH offers students the opportunity to take the university program in different international companies. In this way, becomes apparent its commitment to quality and affordable education for any person.






“

*You will carry out a practical stay in an institution of reference in the sector, where you will have the support of a team made up of IT professionals”*

## tech 46 | Where Can I Do the Internship?



The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:



**Ogilvy Barcelona**

Country	City
Spain	Barcelona

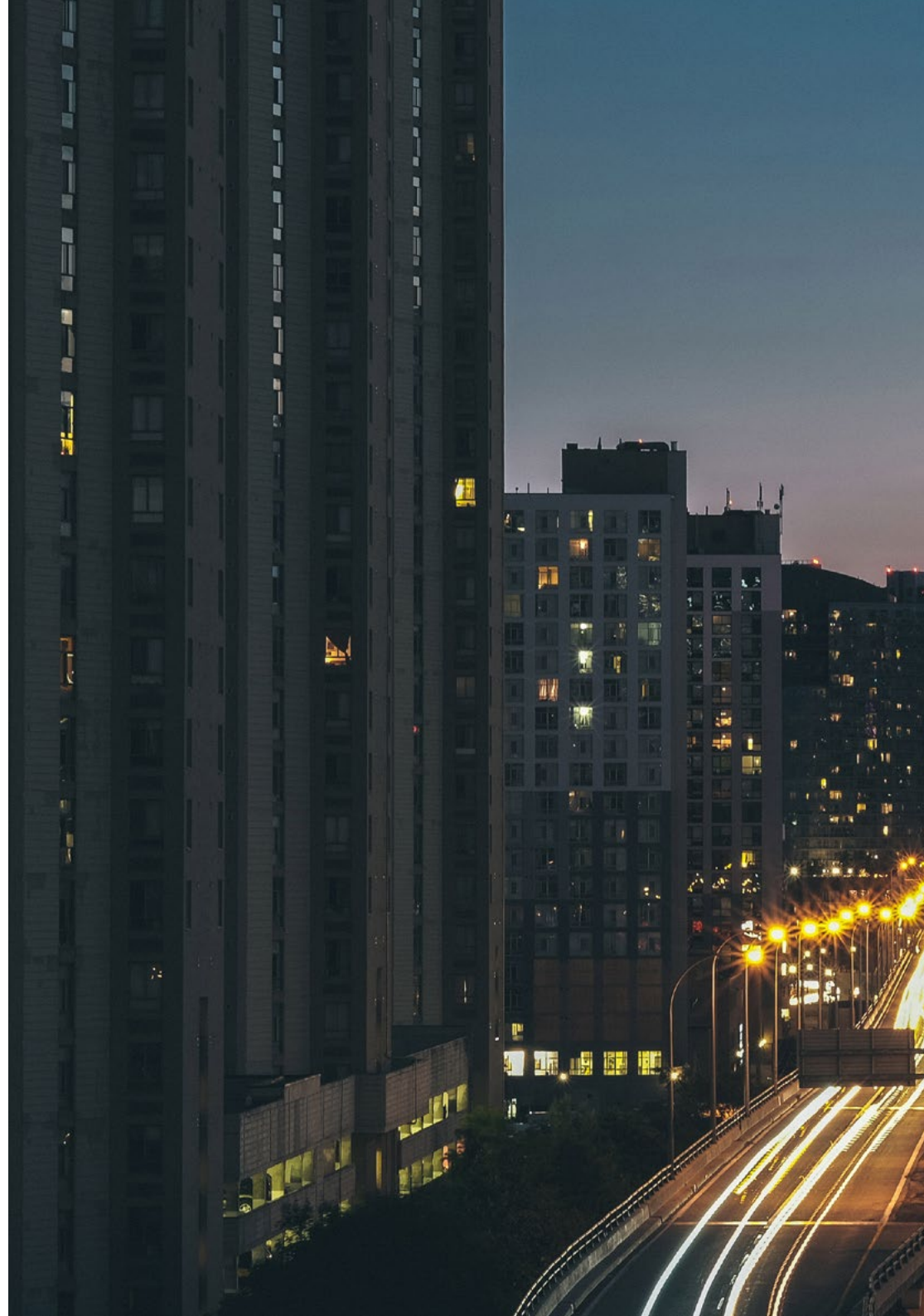
Address: Calle Bolivia 68-70, 08018, Barcelona

Ogilvy is a pioneer in Pervasive Advertising, Marketing and Corporate Communications.

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**Related internship programs:**

- Artificial Intelligence in Design
- Personal Brand Construction







“

*Boost your career path with holistic teaching, allowing you to advance both theoretically and practically”*

09

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

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.



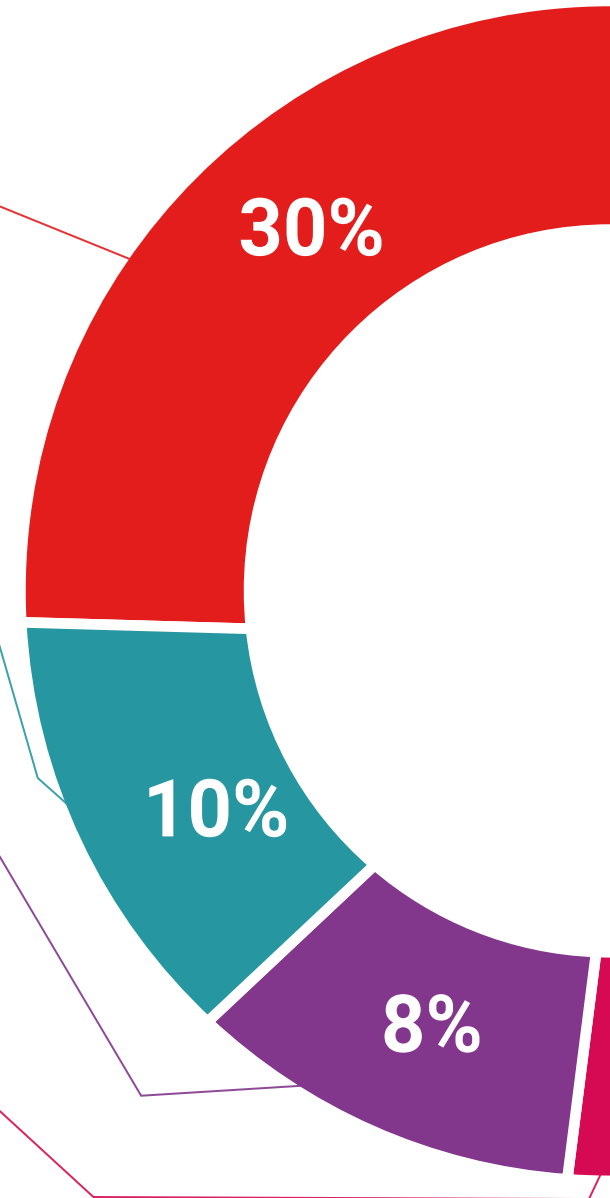
### Practising Skills and Abilities

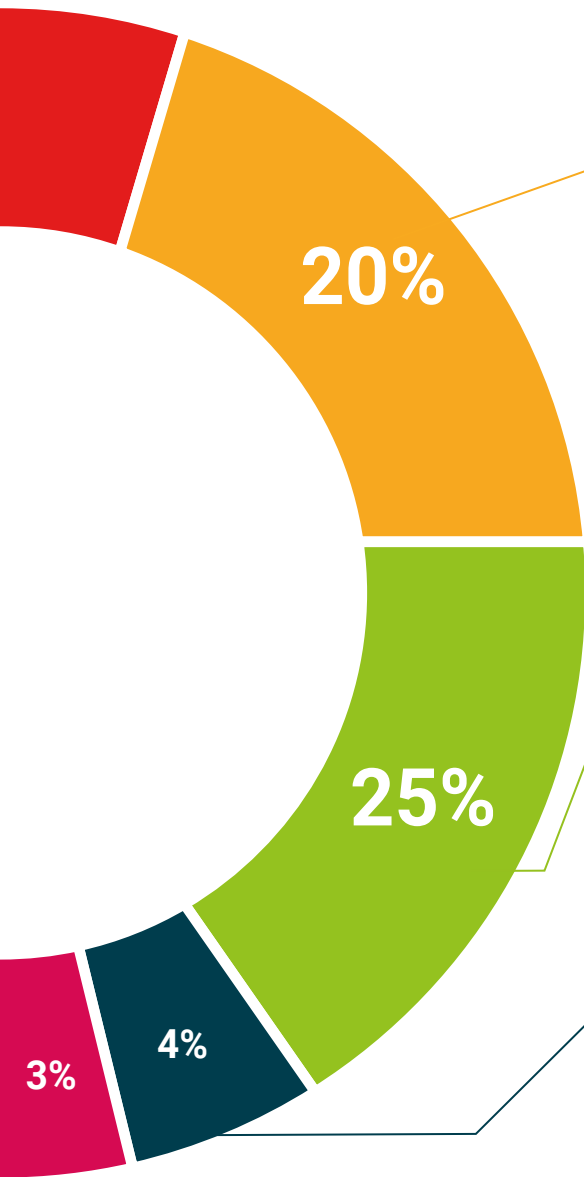
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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.





# 10 Certificate

The Hybrid Professional Master's Degree in Web Application and Service Development guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree 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 **Hybrid Professional Master's Degree in Web Application and Service Development** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

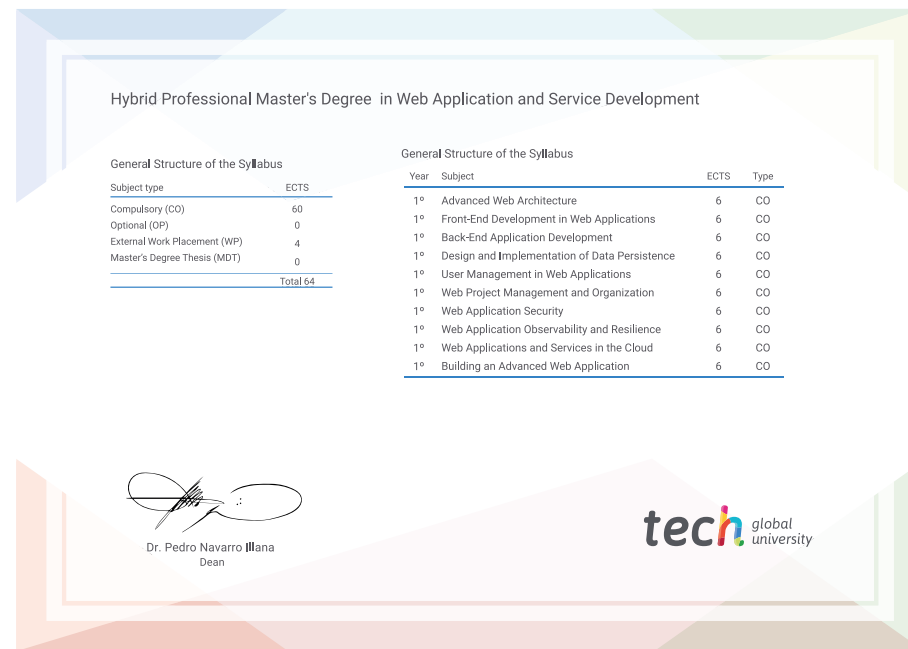
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Hybrid Professional Master's Degree in Web Application and Service Development**

Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Accreditation: **60 + 4 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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 languages  
virtual classroom



## Hybrid Professional Master's Degree

Web Application and Service Development

Modality: Hybrid (Online + Internship)

Duration: 12 months

Certificate: TECH Global University

Credits: 60 + 4 ECTS credits

# Hybrid Professional Master's Degree

## Web Application and Service Development

