

Master's Degree

Front-End and Full-Stack Development



Master's Degree Front-End and Full- Stack Development

- » Modality: Online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitude.com/us/information-technology/master-degree/master-front-end-full-stack-development

Index

01

Introduction to the Program

p. 4

02

Why Study at TECH?

p. 8

03

Syllabus

p. 12

04

Teaching Objectives

p. 24

05

Career Opportunities

p. 30

06

Software Licenses Included

p. 34

07

Study Methodology

p. 38

08

Teaching Staff

p. 48

09

Certificate

p. 52

01

Introduction to the Program

Front-End and Full-Stack Development represents one of the most in-demand skills in the digital field today, in an environment where visual design and server functionality converge to bring dynamic platforms to life. According to data from the United Nations, web development profiles are among the most sought-after in the technology sector, with a trend of sustained growth in recent years. In response to this landscape, this university program from TECH emerges as an academic solution. Through a 100% online methodology and the use of updated teaching materials, an autonomous, interactive experience will be provided, aligned with the current challenges of the market.



“

Thanks to this 100% online program, you will master the most innovative tools and languages in Front-End and Full-Stack Development to create functional web solutions”

In today's digital landscape, mastering the fundamentals of web development has become indispensable for building dynamic, intuitive solutions that meet the demands of the technological environment. For this reason, specializing in Front-End and Full-Stack Development represents a strategic path for those looking to create interactive experiences, from the interface to server-side logic. In fact, this field not only allows you to develop functional digital products but also ensures their performance, accessibility, and scalability—key aspects in today's competitive, user-oriented market.

Therefore, TECH has designed an innovative curriculum that will delve into essential aspects such as the roles involved in programming environments, the design and interpretation of efficient algorithms, and the use of software repositories for collaborative code management. Through a rigorous approach, these contents will be integrated with current industry tools, promoting a comprehensive understanding of the processes involved in the full development of web applications.

Subsequently, this university program will offer professionals a unique opportunity to refine their skills in web environments, consolidating abilities that enable them to build technology projects from scratch and lead digital initiatives with autonomy. Moreover, they will strengthen their decision-making skills, logical thinking, and ability to adapt solutions to various business contexts. Thanks to a preparation aligned with market demands, it will foster a solid professional projection in a field with high global job demand.

Finally, TECH's methodology is characterized by its flexibility, allowing access to all content online at any time of day, from any location, and on multiple internet-connected devices. This model is supported by the innovative Relearning system, which will promote the progressive and lasting assimilation of knowledge through the intelligent repetition of key concepts, reinforcing autonomous and dynamic learning.

This **Master's Degree in Front-End and Full-Stack Development** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Front-End and Full-Stack Development
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Special emphasis on innovative methodologies in computer systems
- ♦ 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



A curriculum based on TECH's disruptive Relearning system, which will facilitate the rapid and flexible assimilation of complex concepts"

“

You will explore the roles involved in programming environments, adapting your understanding to various digital development contexts”

The teaching staff includes professionals from the field of Front-End and Full-Stack Development, bringing their practical experience to the program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide 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.

You will be able to automate development and deployment processes using DevOps tools.

You will manage the use of software repositories, optimizing the collaborative management of code.



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 has a huge faculty of more than 6,000 professors of the highest international prestige.



“

Study at the largest online university in the world and ensure your professional success. The future begins 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 Wistuba, 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 exclusive academic itinerary will delve into highly relevant topics that complement Front-End and Full-Stack Development. Therefore, it will progressively explore tools such as HTML, an essential language for correctly structuring information in digital environments. Additionally, the program will focus on the design of modern layouts, emphasizing adaptability and user experience—crucial elements in the development of efficient interfaces. In parallel, the mastery of JavaScript, indispensable for implementing dynamic functionalities, will be incorporated. This combination of knowledge drives rigorous technical expertise, aligned with the needs of the tech sector.



“

You will deepen your understanding of the latest structural principles of HTML, applied to the development of functional interfaces”

Module 1. Full-Stack Development

- 1.1. Full-Stack Development I. Programming and Languages
 - 1.1.1. Programming
 - 1.1.2. Programming Roles
 - 1.1.3. Languages and Frameworks
 - 1.1.4. Algorithm
 - 1.1.5. Characteristics of an Algorithm
- 1.2. Full-Stack Development II. Types
 - 1.2.1. Variables and Constants
 - 1.2.2. Types
 - 1.2.3. Operators
 - 1.2.4. Declarations
 - 1.2.5. Loops
 - 1.2.6. Functions and Objects
- 1.3. Data Structure in Development
 - 1.3.1. Linear Structure Types
 - 1.3.2. Functional Structure Types
 - 1.3.3. Tree Structure Types
- 1.4. Algorithm Design and Interpretation
 - 1.4.1. Parallelism in Development. Divide and Conquer
 - 1.4.2. Voracious Algorithms
 - 1.4.3. Dynamic Programming
- 1.5. Environment and Tools for Full-Stack Developer-Oriented Development
 - 1.5.1. Preparation of the Environment for Mac OS
 - 1.5.2. Preparation of the Environment for Linux
 - 1.5.3. Preparation of the Environment for Windows
- 1.6. Command Line. Typology and Operation
 - 1.6.1. The Terminal
 - 1.6.2. Emulators
 - 1.6.3. Command Interpreter
 - 1.6.4. First Commands
 - 1.6.5. Navigation
 - 1.6.6. Managing Files and Folders Using the Command Line Interface
 - 1.6.7. Secure Shell. SSH
 - 1.6.8. Advanced Commands
- 1.7. Git. Software Repository
 - 1.7.1. Git Software Repository
 - 1.7.2. Using Git
 - 1.7.3. Software Repository
 - 1.7.4. Branches
 - 1.7.5. Duty Cycle
 - 1.7.6. Commands
- 1.8. Code Versioning Hosting Service
 - 1.8.1. Code Versioning Hosting Service
 - 1.8.2. Suppliers
 - 1.8.3. Repositories
- 1.9. Internet
 - 1.9.1. Internet
 - 1.9.2. Protocols Used in WWW
 - 1.9.3. HTTP Protocol
- 1.10. Methodologies in Full-Stack Development
 - 1.10.1. *Scrum*
 - 1.10.2. *XP*
 - 1.10.3. *Design Sprint*

Module 2. Front-End Programming

- 2.1. HTML Language
 - 2.1.1. HTML Document
 - 2.1.2. Head Element
 - 2.1.3. Body Element
 - 2.1.4. Text
 - 2.1.5. Hyperlinks
 - 2.1.6. Images
 - 2.1.7. *First Site*
- 2.2. HTML Language. *Layouts*
 - 2.2.1. HTML Language. Elements
 - 2.2.2. Traditional Layout
 - 2.2.3. Semantic Layout
- 2.3. Cascading Style Sheets CSS
 - 2.3.1. Inclusion of CSS in an HTML Document
 - 2.3.2. Comments
 - 2.3.3. Selectors
 - 2.3.4. Advanced Selectors
- 2.4. CSS (Cascading Style Sheets) Properties
 - 2.4.1. Color
 - 2.4.2. Text
 - 2.4.3. Pseudo Classes
 - 2.4.4. Transitions
 - 2.4.5. Animations
 - 2.4.6. Animation of Elements
 - 2.4.7. Advanced Animation
- 2.5. Box Models
 - 2.5.1. Height and Width
 - 2.5.2. Margin
 - 2.5.3. Filling
- 2.6. Positioning
 - 2.6.1. Static Positioning
 - 2.6.2. Relative Positioning
 - 2.6.3. Absolute Positioning
 - 2.6.4. Fixed Positioning
 - 2.6.5. *Floats*
- 2.7. Adaptive Design
 - 2.7.1. *Viewport*
 - 2.7.2. *Media queries*
 - 2.7.3. CSS Units
 - 2.7.4. *Images*
 - 2.7.5. *Frameworks*
- 2.8. Modern Layout
 - 2.8.1. *Flex (Flexible Filament)*
 - 2.8.2. *Grid*
 - 2.8.3. Flex vs. Grid
- 2.9. Pre-Processing
 - 2.9.1. Sass
 - 2.9.2. Variables
 - 2.9.3. Mixins
 - 2.9.4. Loops
 - 2.9.5. Functions
- 2.10. System Design
 - 2.10.1. *Bootstrap*
 - 2.10.2. Bootstrap Grid
 - 2.10.3. Header and Footer of Our Site
 - 2.10.4. Forms
 - 2.10.5. *Cards*
 - 2.10.6. Modals

Module 3. JavaScript Language Applied to Full-Stack Development

- 3.1. Primitive Types and Operators
 - 3.1.1. JavaScript Language
 - 3.1.2. Numbers and Their Operators
 - 3.1.3. Text Strings and Their Operators
 - 3.1.4. Boolean Values
 - 3.1.5. Conversion Between Types
- 3.2. Flow Controllers and Structure
 - 3.2.1. Expressions and Statements
 - 3.2.2. Variables and Constants
 - 3.2.3. If Statement
 - 3.2.4. For, While Statements
- 3.3. Functions
 - 3.3.1. Functions
 - 3.3.2. Parameters
 - 3.3.3. Functions as Parameters
 - 3.3.4. Scope of Variables
 - 3.3.5. Nested Scopes
 - 3.3.6. *Hoisting*
 - 3.3.7. *Closures*
 - 3.3.8. Recursion
- 3.4. Data Structures: Objects
 - 3.4.1. Object Type
 - 3.4.2. Creation of Objects
 - 3.4.3. Accessing the Values of an Object
 - 3.4.4. Adding or Deleting Properties
 - 3.4.5. Nested Objects
 - 3.4.6. Destructuring Objects
 - 3.4.7. Object Type Methods
 - 3.4.8. *Spread Operator*
 - 3.4.9. Immutability
- 3.5. Data Structures: *Array*
 - 3.5.1. Data Structure *Array*
 - 3.5.2. Array. Types
 - 3.5.3. Nested Arrays
 - 3.5.4. Methods of an Array
- 3.6. OOP: Prototype and Classes
 - 3.6.1. OOP: Object Oriented Programming
 - 3.6.2. Prototypes
 - 3.6.3. Classes
 - 3.6.4. Private Data
 - 3.6.5. Subclasses
 - 3.6.6. Call and Apply
- 3.7. JavaScript Types
 - 3.7.1. *Set*
 - 3.7.2. *WeakSet*
 - 3.7.3. *Map*
 - 3.7.4. *WeakMap*
 - 3.7.5. Common Expressions
- 3.8. JavaScript Utilities
 - 3.8.1. *Date*
 - 3.8.2. *Math*
 - 3.8.3. *Symbol*
 - 3.8.4. JSON
- 3.9. JavaScript in the Browser
 - 3.9.1. Inclusion of JavaScript in a Website
 - 3.9.2. DOM
 - 3.9.3. Events
 - 3.9.4. Browser Storage

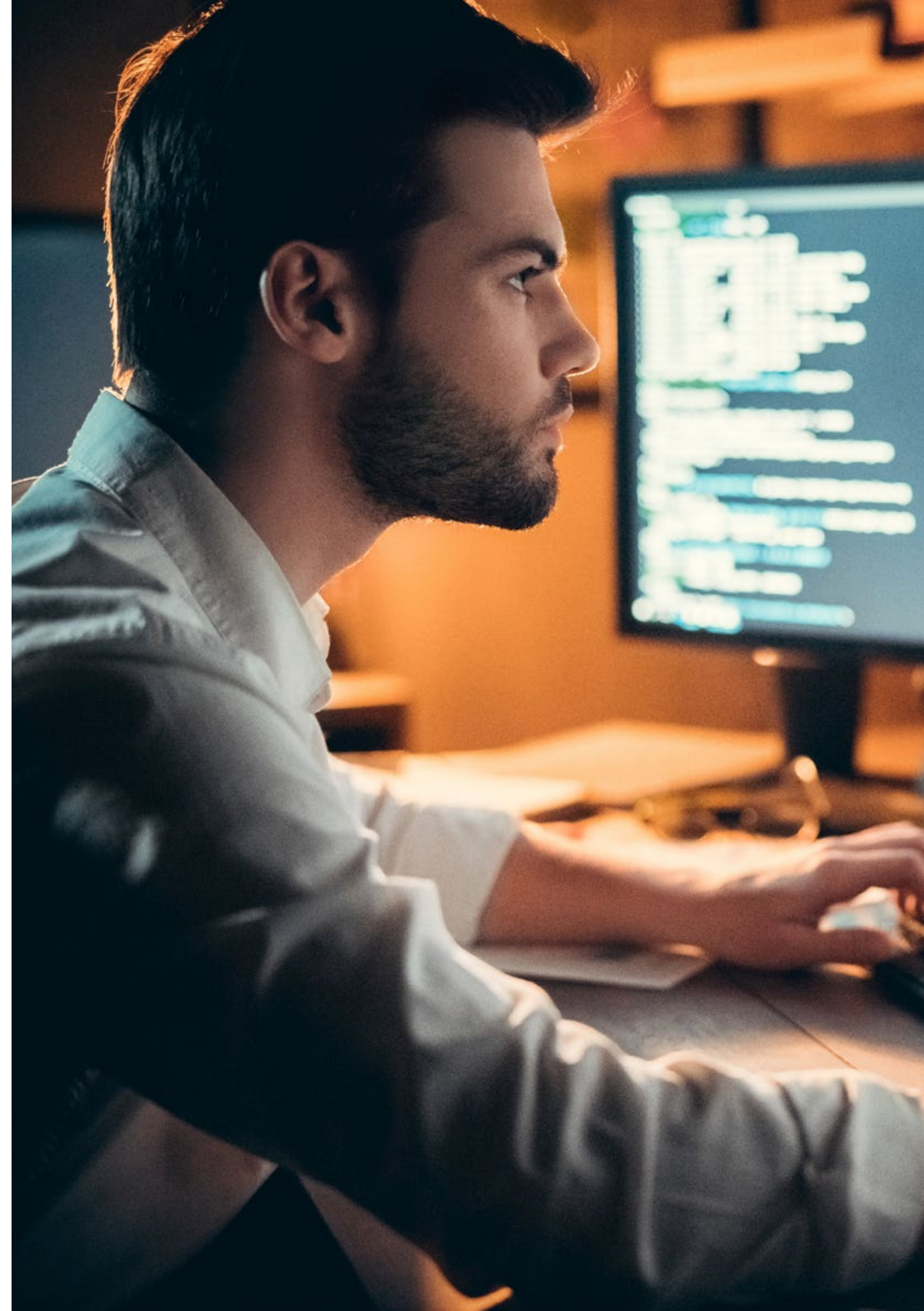
- 3.10. Asynchronous Programming
 - 3.10.1. The Asynchronous Programming
 - 3.10.2. *Event Loop*
 - 3.10.3. *Callbacks*
 - 3.10.4. *Promises*
 - 3.10.5. Async/Await

Module 4. Web Layout Applied to Full-Stack Development

- 4.1. CSS and Layout
 - 4.1.1. Layout with Tables
 - 4.1.2. Fluid Layout
 - 4.1.3. The Responsive Era
 - 4.1.4. Mobile First vs. Desktop First
- 4.2. CSS and the Rules of Web Design
 - 4.2.1. Selectors
 - 4.2.2. Pseudo Classes
 - 4.2.3. Pseudo Elements
- 4.3. Layout with CSS
 - 4.3.1. Box Model Rules
 - 4.3.2. Typographies
 - 4.3.3. Colors
 - 4.3.4. Images
 - 4.3.5. Backgrounds
 - 4.3.6. Tables
 - 4.3.7. Forms
 - 4.3.8. Showing and Hiding Elements
 - 4.3.9. CSS Variables
- 4.4. Responsive Design and Fluid Design
 - 4.4.1. Floating Elements
 - 4.4.2. CSS Grid
 - 4.4.3. *Media queries*
 - 4.4.4. Flex Box
- 4.5. The CSS Cascade
 - 4.5.1. Priority of CSS Rules
 - 4.5.2. Overwriting Rules
 - 4.5.3. Classes vs. Identifiers
- 4.6. SaSS
 - 4.6.1. Software as a Service (SaSS)
 - 4.6.2. SaSS Installation
 - 4.6.3. Running and Compiling SaSS
 - 4.6.4. Structure of a SaSS Directory
- 4.7. Using SaSS
 - 4.7.1. Variables in Sass
 - 4.7.2. Modularization of Our Project
 - 4.7.3. SaSS Syntax
- 4.8. SaSS Logic
 - 4.8.1. Mixins
 - 4.8.2. Maps
 - 4.8.3. Functions and Control Structures
- 4.9. Layout with Bootstrap
 - 4.9.1. *Bootstrap*
 - 4.9.2. Bootstrap Layout
 - 4.9.3. Forms
 - 4.9.4. Box Model with Bootstrap
 - 4.9.5. Colors and Fonts
 - 4.9.6. Links and Buttons
 - 4.9.7. Showing and Hiding Elements with Bootstrap
 - 4.9.8. Flex Box with Bootstrap
 - 4.9.9. Components
- 4.10. *Theming Bootstrap*
 - 4.10.1. Rewriting Bootstrap with SaSS (Software as a Service)
 - 4.10.2. File Structure
 - 4.10.3. Creating our Own CSS Framework (Cascading Style Sheets)

Module 5. Javascript Tools. ReactJS Library

- 5.1. ReactJS Javascript Tool
 - 5.1.1. The ReactJS Tool
 - 5.1.2. Create React App
 - 5.1.3. JavaScript Syntax Extension
- 5.2. ReactJS Components
 - 5.2.1. Components
 - 5.2.2. *Props*
 - 5.2.3. Rendering
- 5.3. Events in the ReactJS Library
 - 5.3.1. Event Handling
 - 5.3.2. Inline Event Handling
 - 5.3.3. Events in the ReactJS Library
- 5.4. Configuring ReactJS Hooks
 - 5.4.1. Status of a Component
 - 5.4.2. Status Hook
 - 5.4.3. Hook Effect
 - 5.4.4. *Custom Hooks*
 - 5.4.5. Other Hooks
- 5.5. Context Component in ReactJS
 - 5.5.1. Context Component in ReactJS
 - 5.5.2. Using Context
 - 5.5.3. Context Structure
 - 5.5.4. *React createContext*
 - 5.5.5. *Context.Provider*
 - 5.5.6. *Class. Context Type*
 - 5.5.7. *Context. Consumer*
 - 5.5.8. *Context.displayName*
 - 5.5.9. Practical Application of Context



- 5.6. Routing in ReactJs
 - 5.6.1. *Router*
 - 5.6.2. *React router*
 - 5.6.3. Installation
 - 5.6.4. Basic Routing
 - 5.6.5. Dynamic Routing
 - 5.6.6. Primary Components
 - 5.6.7. *React Router Hooks*
- 5.7. Using Lists and Forms with ReactJS
 - 5.7.1. Lists and Loops
 - 5.7.2. Forms and Validations
 - 5.7.3. *React Hook Forms*
- 5.8. Using Styles in ReactJS
 - 5.8.1. Traditional Styling
 - 5.8.2. Inline Styling
 - 5.8.3. Addition of Design System Library
- 5.9. Performing Tests in Javascript. Tools
 - 5.9.1. *Testing*
 - 5.9.2. Jest JavaScript Testing Framework
 - 5.9.3. *Visual Testing and Documentation*
- 5.10. Deploying Code with ReactJS
 - 5.10.1. *Hosting*
 - 5.10.2. Suppliers
 - 5.10.3. Project Preparation
 - 5.10.4. Deployment on Heroku

Module 6. JavaScript Framework. Angular

- 6.1. The Angular Framework and its Architecture
 - 6.1.1. Angular CLI
 - 6.1.2. Architecture
 - 6.1.3. Workspace and Structure
 - 6.1.4. Environment
- 6.2. Angular Framework Components
 - 6.2.1. Life Cycle
 - 6.2.2. View Encapsulation
 - 6.2.3. Interaction Between Components
 - 6.2.4. Content Projection
- 6.3. Angular Framework Templates
 - 6.3.1. Text Interpolation
 - 6.3.2. Declarations
 - 6.3.3. *Property Binding*
 - 6.3.4. Class, Style and Attribute Binding
 - 6.3.5. Event Binding and Two-Way Binding
 - 6.3.6. *Pipes*
- 6.4. Angular Framework Directives
 - 6.4.1. Angular Directives
 - 6.4.2. Attribute Directives
 - 6.4.3. Structure Directives
- 6.5. Services and Dependency Injection
 - 6.5.1. Services
 - 6.5.2. Dependency Injection
 - 6.5.3. *Service Providers*

- 6.6. Routing and Navigation
 - 6.6.1. Application with Routing
 - 6.6.2. Basic Routing
 - 6.6.3. Nested Routes
 - 6.6.4. Parameters
 - 6.6.5. Access and Authorization
 - 6.6.6. Lazy Loading of Modules
- 6.7. RxJS
 - 6.7.1. Observables
 - 6.7.2. Observers
 - 6.7.3. Subscriptions
 - 6.7.4. Operators
- 6.8. Forms and HTTP
 - 6.8.1. Reactive Forms
 - 6.8.2. Field Validation
 - 6.8.3. Dynamic Forms
 - 6.8.4. Requests
 - 6.8.5. *Interceptors*
 - 6.8.6. Security
- 6.9. Animations
 - 6.9.1. Transitions and Triggers
 - 6.9.2. Path Transitions
 - 6.9.3. Differences Between Transitions
- 6.10. Testing in the Angular Framework
 - 6.10.1. Testing Services
 - 6.10.2. Component Testing
 - 6.10.3. Testing of Directives and Pipelines

Module 7. Programming in NodeJs Language

- 7.1. NodeJS and its Architecture
 - 7.1.1. NPM and Package Management
 - 7.1.2. Executing a Program
 - 7.1.3. Modules
 - 7.1.4. Creating a Module
 - 7.1.5. Loop of Events
- 7.2. Back-End Server, HTTP, Express, and Sockets
 - 7.2.1. Module HTTP
 - 7.2.2. Express
 - 7.2.3. Socket.io
- 7.3. Database and Cache
 - 7.3.1. MongoDB
 - 7.3.2. Mongoose
 - 7.3.3. SQL
 - 7.3.4. Sequelize
 - 7.3.5. Redis
- 7.4. File System and Os
 - 7.4.1. *File System Module*
 - 7.4.2. OS Module
 - 7.4.3. *Cluster module*
- 7.5. Events, Buffers and Streams
 - 7.5.1. Events
 - 7.5.2. *Buffers*
 - 7.5.3. *Streams*
- 7.6. *Testing*
 - 7.6.1. Jest
 - 7.6.2. Mocha
 - 7.6.3. TDD - Cucumber

- 7.7. Architecture and Good Practices
 - 7.7.1. DRY
 - 7.7.2. SOLID
 - 7.7.3. CRUD
 - 7.7.4. MVC
 - 7.7.5. Monoliths
 - 7.7.6. Microservices
 - 7.7.7. Hexagonal Architecture
- 7.8. Typescript
 - 7.8.1. Types, Interfaces and Classes
 - 7.8.2. Functions and Modules
 - 7.8.3. Generics
 - 7.8.4. *Namespaces*
 - 7.8.5. Decorators
- 7.9. API REST
 - 7.9.1. Get
 - 7.9.2. Post
 - 7.9.3. Put Option
 - 7.9.4. Delete
 - 7.9.5. *Swagger*
 - 7.9.6. Building a REST API with Express
- 7.10. Creation and Containerization of an Application with NestJS
 - 7.10.1. Nest CLI
 - 7.10.2. *Docker*
 - 7.10.3. Building an Application

Module 8. Databases for Full-Stack Developers

- 8.1. Databases for Full-Stack Developers
 - 8.1.1. Database within Application Development
 - 8.1.2. Database Capabilities
 - 8.1.3. SQL (Structured Query Language)
- 8.2. Choice of Database
 - 8.2.1. Application or Service to be Considered
 - 8.2.2. Database Categories
 - 8.2.3. Database Overview
- 8.3. Development with MySQL
 - 8.3.1. Development with MySQL
 - 8.3.2. Deployment of Relational Model with MySQL
 - 8.3.3. Connection to MySQL
- 8.4. Development with Oracle Database
 - 8.4.1. Development with Oracle DB
 - 8.4.2. Model Deployment
 - 8.4.3. Connection to Oracle Database
- 8.5. Development with Oracle SQL Server
 - 8.5.1. Oracle SQL Server
 - 8.5.2. Model Deployment
 - 8.5.3. Connection to SQL Server
- 8.6. Development with NoSQL
 - 8.6.1. Comparison with SQL Databases
 - 8.6.2. Database Creation in MongoDB
 - 8.6.3. Connection to MongoDB

- 8.7. Development with Networks
 - 8.7.1. Development with Networks
 - 8.7.2. Database Creation with Neo4j
 - 8.7.3. Connection with Neo4j
- 8.8. Key-value Database Development
 - 8.8.1. Development with K-V Database
 - 8.8.2. Database Creation with Redis
 - 8.8.3. Connection with Redis
- 8.9. Databases with Other Data Types
 - 8.9.1. *Elastic Search*
 - 8.9.2. *Immemory Database*
 - 8.9.3. Development with Spatial Data
- 8.10. Database. Advanced Aspects
 - 8.10.1. Databases in Cloud Native Development
 - 8.10.2. Databases in Microservices Architecture
 - 8.10.3. CI/CD and Databases

Module 9. UX CX. Customer Experience

- 9.1. *Customer Experience*
 - 9.1.1. Customer Experience (CX)
 - 9.1.2. New Consumer Needs
 - 9.1.3. Feedback in Customer Experience
- 9.2. Innovative Technologies
 - 9.2.1. Thinking Machines
 - 9.2.2. New Ways of Sharing Information
 - 9.2.3. Measuring What Cannot Be Measured
- 9.3. Channels of Interaction with the User
 - 9.3.1. Customer Analysis
 - 9.3.2. Personalization
 - 9.3.3. Multiple User Interaction Channels

- 9.4. User Analytics
 - 9.4.1. Web Structure
 - 9.4.2. User Analytics
 - 9.4.3. Advanced User Analytics
- 9.5. Nielsen and its Impact on CX
 - 9.5.1. Nielsen and its Impact on CX
 - 9.5.2. User Testing Techniques
- 9.6. Customer Experience Tools
 - 9.6.1. Advanced Tools
 - 9.6.2. Mobility
 - 9.6.3. Accessibility
- 9.7. New Methodologies
 - 9.7.1. The User's Challenge
 - 9.7.2. UX Process
 - 9.7.3. User Research
- 9.8. Communication of a Design
 - 9.8.1. *Wireframing*
 - 9.8.2. Design Communication Tools
 - 9.8.3. Advanced Design Communication Tools
- 9.9. UI design
 - 9.9.1. UI design
 - 9.9.2. Web and Mobile Interfaces
 - 9.9.3. Web and Mobile Components
- 9.10. Elaboration of a CX
 - 9.10.1. Elaboration of a CX
 - 9.10.2. Design of New Experiences
 - 9.10.3. Interfaces

Module 10. Continuous Integration and Application Deployment

- 10.1. Continuous Integration and Continuous Deployment: CI/CD
 - 10.1.1. Use of Continuous Integration and Continuous Deployment (CI/CD)
 - 10.1.2. Differences Between Continuous Integration and Continuous Deployment (CI/CD)
 - 10.1.3. Continuous Integration and Continuous Deployment. Benefits of CI/CD
- 10.2. New Development Paradigms
 - 10.2.1. From Waterfall to DevOps
 - 10.2.2. Style Guide: The 12 Factors
 - 10.2.3. Cloud Native, Microservices and Serverless
- 10.3. DevOps, Beyond CI/CD
 - 10.3.1. DevOps
 - 10.3.2. DevOps. *Continuous Everything*
 - 10.3.3. DevOps vs SRE
- 10.4. Container Technology I - Docker
 - 10.4.1. Containers. Contribution
 - 10.4.2. Docker. Architecture
 - 10.4.3. Deployment Process with Docker
- 10.5. Container Technology II - Kubernetes
 - 10.5.1. Orchestration
 - 10.5.2. Kubernetes
 - 10.5.3. The Kubernetes Ecosystem
- 10.6. Infrastructure Configuration with GitOps
 - 10.6.1. Immutable Infrastructure
 - 10.6.2. GitOps
 - 10.6.3. GitOps Tools
- 10.7. Pipelines and Automation. CI/CD Use Cases
 - 10.7.1. Continuous Integration
 - 10.7.2. Continuous Deployment and Delivery
 - 10.7.3. Automatic Validation
 - 10.7.4. Best Practices in CI/CD
- 10.8. CI/CD with Jenkins. Reference:
 - 10.8.1. CI/CD with Jenkins
 - 10.8.2. Jenkins Pipelines
 - 10.8.3. Best Practices with Jenkins
- 10.9. CI/CD Ecosystem
 - 10.9.1. Ecosystem Organization
 - 10.9.2. Advanced Tools
 - 10.9.3. Dagger. The Future
- 10.10. Final Phases of the CI/CD Oriented Software Cycle
 - 10.10.1. Application of IA to the CI/CD Process
 - 10.10.2. DevSecOps
 - 10.10.3. *Chaos Engineering*



Stay up to date with the use of databases tailored to Full-Stack developers, essential for efficiently managing information in web environments"

04

Teaching Objectives

This university program primarily focuses on strengthening technical skills that enable professionals to confidently navigate the development of digital solutions. To achieve this, the mastery of current programming languages and frameworks will be prioritized, along with a deep understanding of algorithms and data structures applied to real-world environments. Thanks to this approach, the ability to design functional systems aligned with the needs of the tech industry will be promoted.



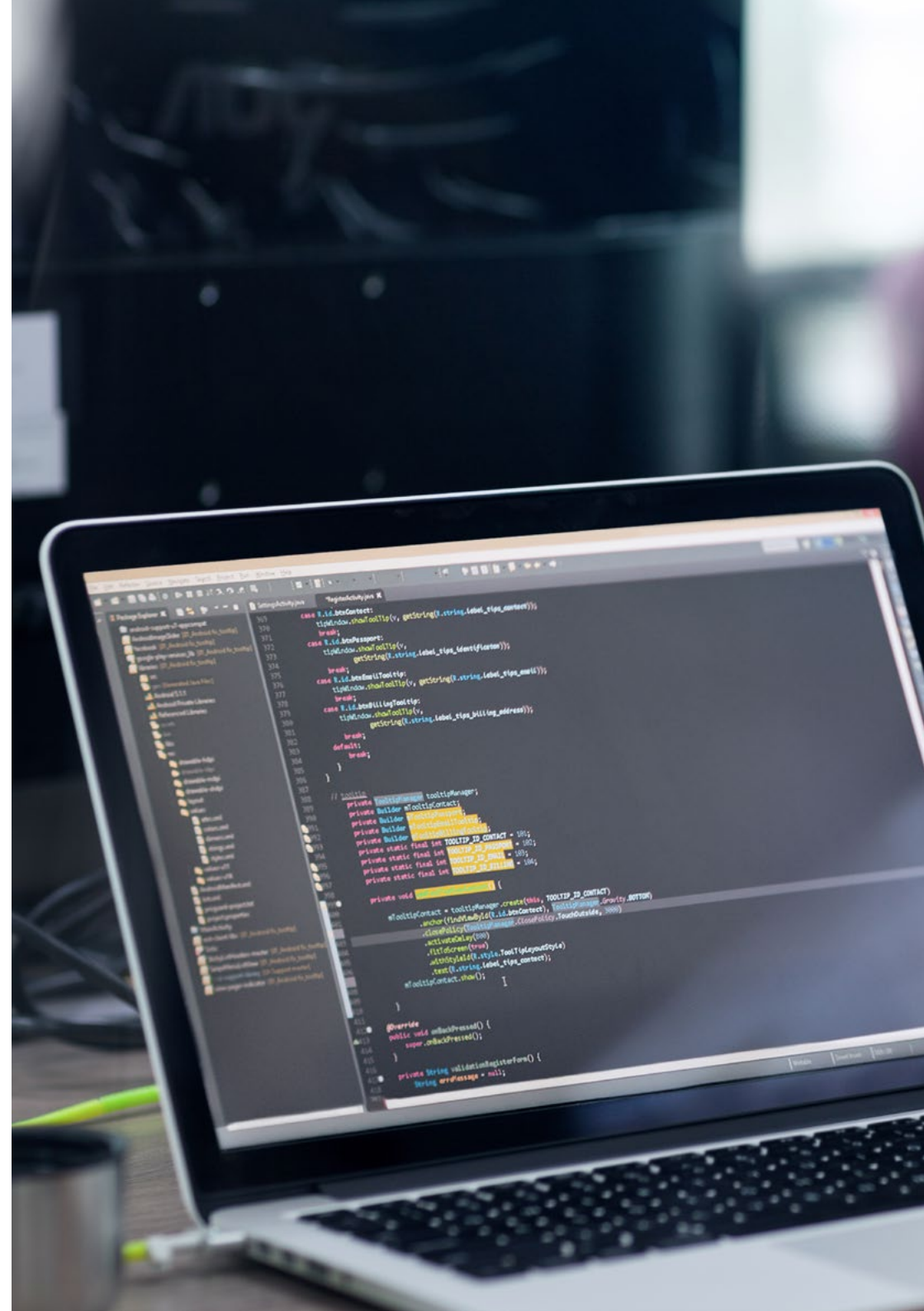
“

You will evaluate the impact of using current frameworks in programming environments, identifying their operational advantages”



General Objectives

- ♦ Develop comprehensive skills in the Full-Stack environment, covering both interface design and server logic, as well as data management
- ♦ Strengthen the handling of front-end structures, incorporating best programming practices to ensure functional and efficient interfaces
- ♦ Apply JavaScript in building dynamic applications, integrating advanced logic and reusable components
- ♦ Implement web layout techniques focused on adaptability, user experience, and visual consistency of the project
- ♦ Integrate libraries such as ReactJS to optimize performance and scalability of developed applications
- ♦ Use frameworks like Angular to structure complex applications, maintaining an organized and sustainable workflow
- ♦ Utilize the NodeJS environment for server-side programming, ensuring efficient communication between client and database
- ♦ Manage databases and continuous integration processes, ensuring deployment automation and maintaining Full-Stack development quality





Specific Objectives

Module 1. Full-Stack Development

- ♦ Employ algorithms and data structures to solve problems in Full-Stack development environments
- ♦ Recognize the different roles within a programming team and their impact on project development
- ♦ Manage code versions using Git and collaborative hosting services
- ♦ Implement agile methodologies to optimize the organization and execution of tasks in technology projects

Module 2. Front-End Programming

- ♦ Structure web content using fundamental elements of HTML and semantic design principles
- ♦ Apply Cascading Style Sheets (CSS) to define the visual appearance of websites, including animations and transitions
- ♦ Implement box models and positioning techniques to build organized and functional interfaces
- ♦ Use responsive design principles and Media Queries to ensure correct display on various devices
- ♦ Differentiate and apply modern layout systems like Flexbox and Grid to optimize content organization
- ♦ Integrate preprocessors like Sass and frameworks like Bootstrap to speed up development and maintain visual consistency

Module 3. JavaScript Language Applied to Full-Stack Development

- ♦ Master JavaScript's primitive types and operators to establish a solid foundation in data handling and logical structures
- ♦ Design advanced functions that include closures, recursion, and scope management, strengthening control over execution flow
- ♦ Manipulate complex structures such as objects, arrays, sets, and maps, applying modern methods for access, transformation, and immutability
- ♦ Manage asynchronous programming using callbacks, promises, and async/await functions to optimize response and efficiency in dynamic environments

Module 4. Web Layout Applied to Full-Stack Development

- ♦ Implement responsive designs using CSS Grid, Flexbox, and Media Queries, adapting web interfaces to multiple devices and resolutions
- ♦ Build organized visual structures by applying layout principles, fluid design, and box model rules
- ♦ Use preprocessors like Sass to optimize CSS code through variables, mixins, functions, and project modularization
- ♦ Integrate Bootstrap into web projects, customizing its theming with Sass to develop reusable components and coherent visual systems

Module 5. Javascript Tools. ReactJS Library

- ♦ Build dynamic interfaces using reusable components, managing their state and lifecycle with built-in and custom Hooks
- ♦ Implement smooth navigation in single-page applications using React Router and its features for dynamic routing
- ♦ Manage shared data flows between components effectively using the Context API and its associated methods
- ♦ Prepare, test, and deploy projects developed with ReactJS using tools like Jest and platforms like Heroku

Module 6. JavaScript Framework. Angular

- ♦ Design modular and scalable applications in Angular, understanding its architecture, CLI, and project organization principles
- ♦ Implement advanced interaction between components, directives, and templates using techniques like data binding, content projection, and custom pipes
- ♦ Manage services, dependencies, and integration with forms and HTTP requests using dependency injection and interceptors
- ♦ Incorporate dynamic navigation, security, Lazy Loading, and animations to optimize the user experience in single-page applications

Module 7. Programming in NodeJs Language

- ♦ Understand the architecture of NodeJS and its operation through modules, NPM, and the event loop
- ♦ Create servers with Express and Socket.io, handling HTTP requests and real-time communication
- ♦ Connect applications to databases using Mongoose and Sequelize, managing data efficiently
- ♦ Design RESTful APIs and deploy them with NestJS and Docker, applying modern architectural principles

Module 8. Databases for Full-Stack Developers

- ♦ Distinguish between different types of databases and select the most suitable option based on development needs
- ♦ Implement relational models and connect applications to systems like MySQL, Oracle, and SQL Server
- ♦ Develop projects with NoSQL databases, graph databases, and key-value stores, integrating solutions like MongoDB, Neo4j, and Redis
- ♦ Integrate databases in cloud-native environments, microservices, and CI/CD flows with an advanced approach

Module 9. UX CX. Customer Experience

- ♦ Understand the evolution of Customer Experience and its impact on new consumption habits
- ♦ Integrate innovative technologies to improve user interaction and personalize the experience
- ♦ Analyze user behavior through advanced analytics tools and usability testing
- ♦ Design user-centered experiences applying UX, UI, and effective visual communication methodologies

Module 10. Continuous Integration and Application Deployment

- ♦ Distinguish between CI/CD phases and their integration into new DevOps-oriented development models
- ♦ Use tools like Docker, Kubernetes, and Jenkins to automate deployment and orchestration processes
- ♦ Apply infrastructure-as-code best practices with GitOps and automated validations
- ♦ Incorporate advanced approaches like DevSecOps, Chaos Engineering, and AI into continuous integration environments

05

Career Opportunities

This university qualification will provide you with the academic experience needed to access roles such as Software Architect, Automation Manager, or Cloud Infrastructure Specialist. Through its competencies, it will be possible to integrate into technological development centers, digital solution companies, or projects in global enterprises. Additionally, it will facilitate adaptation to environments where operational efficiency, continuous integration, and automated deployment represent competitive advantages. This will open up concrete opportunities to lead strategic initiatives, optimize technical processes, and actively participate in the design of scalable and secure systems.



“

Are you looking to work as a Responsive Web Application Developer? Achieve this with this university qualification in just a few months!”

Graduate Profile

The graduate of this program will be characterized by a high ability to develop complete web applications, both on the client-side and server-side. Throughout the university program, they will incorporate modern techniques in layout, API management, and database manipulation. They will also be able to implement interactive, optimized, and adaptable solutions across multiple devices. Furthermore, they will master version control tools, automated testing, and continuous deployment. Finally, they will be prepared to integrate into real projects, lead scalable developments, and quickly adapt to new technologies in the digital environment.

You will take on key roles in database management, optimizing queries and structures with precision.

- ♦ **Logical Thinking:** Ability to structure efficient and coherent solutions to complex problems, facilitating the development of clean, functional, and scalable code
- ♦ **Effective Communication:** Aptitude for collaborating with multidisciplinary teams, enabling the clear communication of technical ideas in both in-person and remote settings
- ♦ **Technological Adaptability:** Ability to facilitate the rapid integration of new tools, frameworks, and constantly evolving digital environments within the web development ecosystem
- ♦ **Time Management:** Competence in organizing tasks and meeting deadlines in agile projects, optimizing resources, and improving productivity in demanding environments





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

1. **Full-Stack Developer:** Responsible for designing and building complete applications, from the visual interface to server logic and database management.
2. **Front-End Developer:** Focused on creating interactive, accessible, and adaptable interfaces, optimizing the user experience on browsers and devices.
3. **Back-End Developer:** Responsible for server-side logic, database management, and API development, ensuring the proper functioning of the system.
4. **Web Software Engineer:** Responsible for developing and maintaining complex web applications with a focus on scalability, security, and performance.
5. **Web Application Developer:** Focused on creating functional digital platforms using modern technologies and updated frameworks such as React, Angular, or Vue.
6. **Software Architect:** Responsible for defining the technical structure of projects, selecting tools, languages, and patterns to ensure quality and sustainability.
7. **DevSecOps Specialist:** Responsible for implementing security practices throughout the development cycle, integrating protection from code writing to deployment.
8. **Database Administrator:** Manages data integrity, ensuring its availability and recovery in case of failures.
9. **Interface Design:** Responsible for designing intuitive visual components aligned with usability and the digital product's visual identity.
10. **Digital Transformation Consultant:** Responsible for advising companies on the adoption of digital solutions, improving processes and services with innovative technological tools.

06

Software Licenses Included

TECH is a leading reference in the academic world for combining the latest technology with teaching methodologies to enhance the teaching-learning process. To achieve this, it has established a network of alliances that allows it to access the most advanced software tools used in the professional world.



“

Upon enrolling, you will receive, completely free of charge, academic credentials for the following professional software applications”

TECH has established a network of professional alliances with the leading providers of software applied to various professional fields. These alliances allow TECH to access hundreds of software applications and licenses, making them available to its students.

The academic software licenses will allow students to use the most advanced applications in their professional field, so they can become familiar with them and master their use without incurring additional costs. TECH will handle the software license acquisition process so that students can use them unlimitedly for the duration of their studies in the Master's Degree in Front-End and Full-Stack Development, and they will be able to do so completely free of charge.

TECH will provide free access to the following software applications:

FigJam

Graduates will have access to **FigJam**, an online collaboration tool valued at **60 euros, at no additional cost**. This digital whiteboard facilitates the organization of ideas, creation of visual flows, and joint planning, making it an essential resource for teams that require clarity and synchronization in their projects.

This platform promotes fluid work environments, where each member can contribute in real time from any device. Its intuitive interface, combined with native integration with Figma, strengthens the connection between initial ideation and the technical development of effective and functional solutions.

Key Features:

- ♦ **Collaborative ideation:** synchronous co-creation with multiple users
- ♦ **Integrated visual tools:** notes, lines, stickers, and markers
- ♦ **Transfer with Figma:** continuity of work between platforms
- ♦ **Predesigned templates:** ready-to-use structures for agile sessions
- ♦ **Universal access:** web-based use with no installation required

In short, **FigJam** is the perfect ally for professionals who need to transform ideas into concrete actions quickly and clearly.



Google Career Launchpad

Google Career Launchpad is a solution for developing digital skills in technology and data analysis. With an estimated value of **5,000 dollars**, it is included for free in TECH's university program, providing access to interactive labs and certifications recognized in the industry.

This platform combines technical training with practical cases, using technologies such as BigQuery and Google AI. It offers simulated environments to work with real data, along with a network of experts for personalized guidance.

Key Features:

- ♦ **Specialized Courses:** Updated content in cloud computing, machine learning, and data analysis
- ♦ **Live Labs:** Hands-on practice with real Google Cloud tools, no additional configuration required
- ♦ **Integrated Certifications:** Preparation for official exams with international validity
- ♦ **Professional Mentoring:** Sessions with Google experts and technology partners
- ♦ **Collaborative Projects:** Challenges based on real-world problems from leading companies

In conclusion, **Google Career Launchpad** connects users with the latest market technologies, facilitating their entry into fields such as artificial intelligence and data science with industry-backed credentials.

Figma

During this university program, graduates will be able to use the **Figma** license, estimated to be worth **180 euros, free of charge**. This software allows users to design collaborative interfaces and prototypes online, integrating key tools that optimize visual production from the early stages of digital development.

This platform stands out for its focus on remote collaboration, allowing multiple users to work on the same project seamlessly. In addition, its system of reusable components facilitates the maintenance of visual standards, which is essential for teams that handle multiple products or versions simultaneously.

Key Features:

- ♦ **Web and mobile interface design:** precise development with property control
- ♦ **User experience simulation:** smooth navigation between interactive screens
- ♦ **Version history:** change tracking and recovery of previous files
- ♦ **Collaborative spaces:** real-time sharing between designers and developers
- ♦ **Visual automation:** plugins for repetitive tasks and rapid content generation

In conclusion, **Figma** provides professional access to cutting-edge tools for creating digital products that meet the industry's most demanding standards.

07

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.



“

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.

“

*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

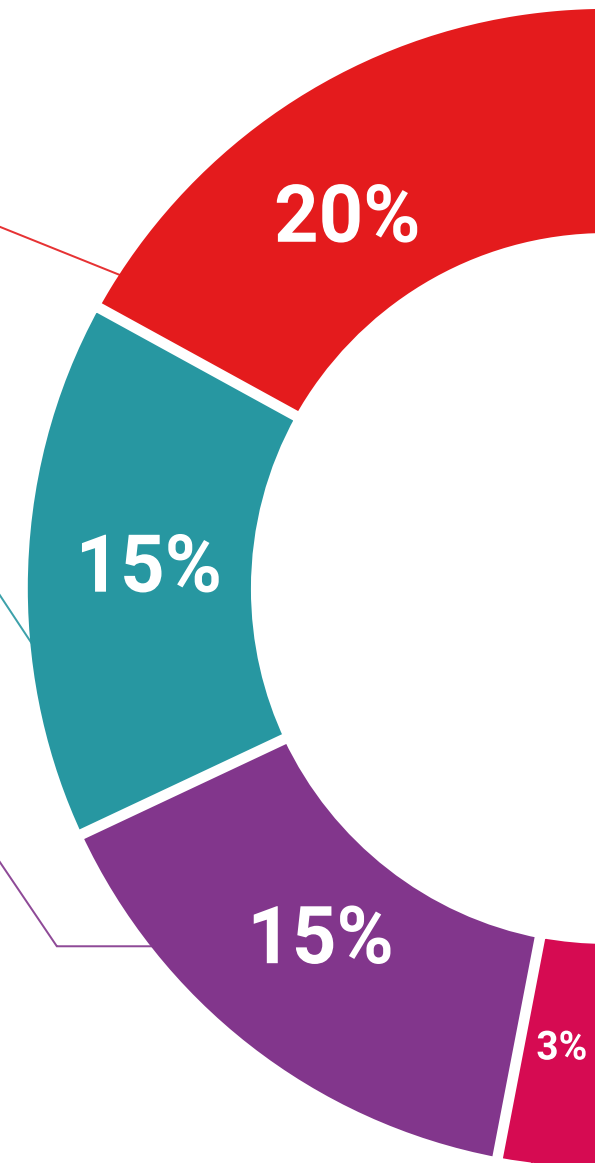
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

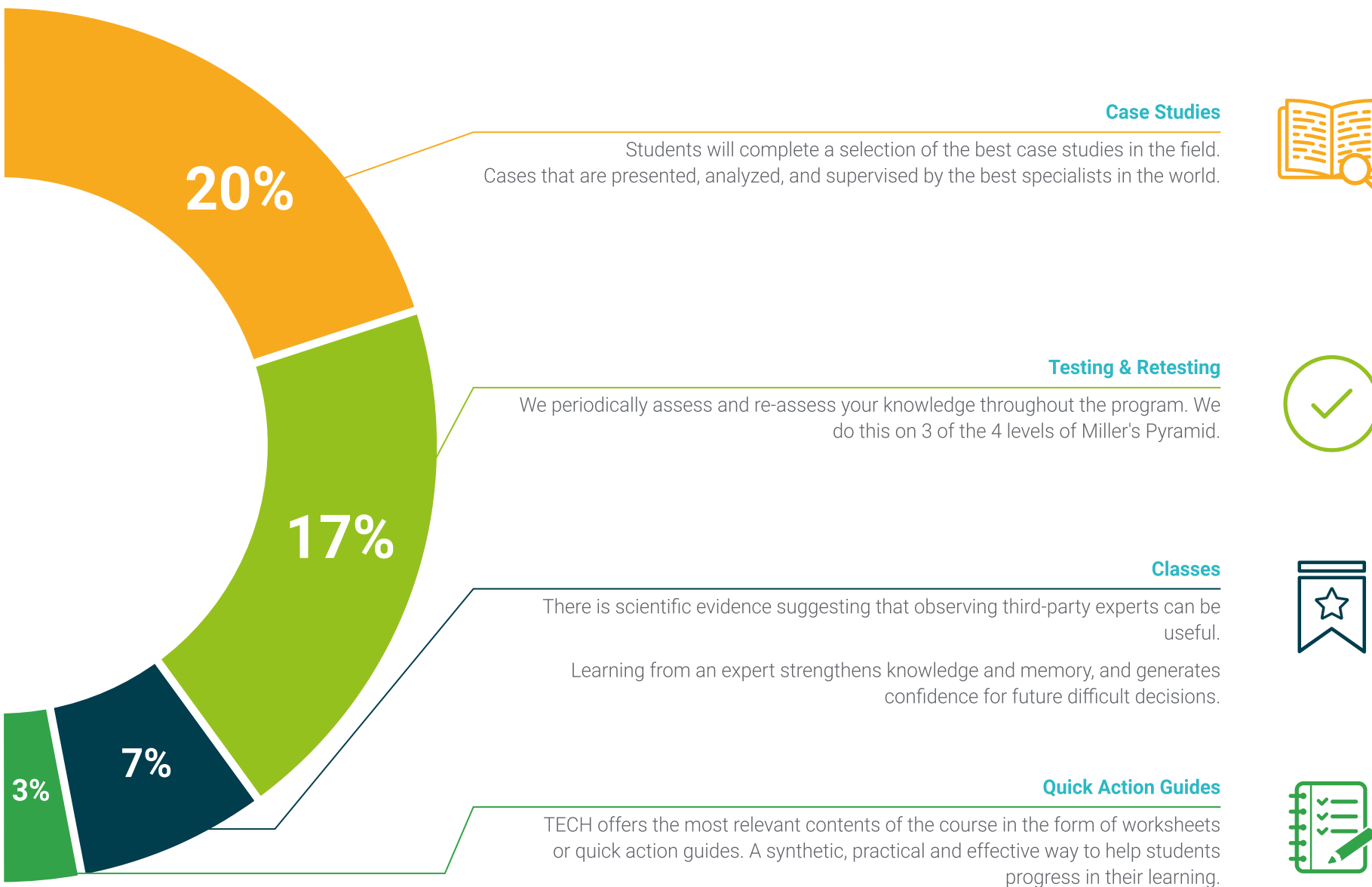
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





08

Teaching Staff

TECH applies a rigorous process in selecting the teaching staff responsible for its programs. Thanks to this demanding process, high-level academic teams are formed, committed to excellence and with a focus on the professional evolution of IT specialists. As a result, not only will the content be solid and up-to-date, but the academic experience will also be supported by high-quality teaching materials, complementary resources, and a personalized approach. As such, the graduate will find in TECH Global University the support of the world's largest online institution, committed to their growth and career development.





“

The teaching team, specialized in Front-End and Full-Stack Development, has designed additional hours of content for you to expand each section of the syllabus in a personalized manner”

Management



Mr. Olalla Bonal, Martín

- ♦ Senior Blockchain Practice Manager at EY
- ♦ Blockchain Client Technical Specialist for IBM
- ♦ Director of Architecture for Blocknitive
- ♦ Team Coordinator in Non-Relational Distributed Databases for WedoIT, a subsidiary of IBM
- ♦ Infrastructure Architect at Bankia
- ♦ Head of Layout Department at T-Systems
- ♦ Department Coordinator for Bing Data España SL

Teachers

Mr. Guerrero Díaz-Pintado, Arturo

- ♦ Director of Customer Experience for IBM
- ♦ Technical Pre-Sales Engineer through Watson Customer Engagement portfolio
- ♦ R&D Network Engineer at Telefónica
- ♦ Degree in Telecommunications Engineering from the University of Alcalá and the Danish Technical University

Mr. Frias Favero, Pedro Luis

- ♦ Lead Blockchain Architect at EY
- ♦ Co-founder and Technical Director of Swear IT Technologies
- ♦ IT Support Director for Key Business One. Mexico, Colombia and Spain
- ♦ Degree in Industrial Engineering from Yacambú University
- ♦ Expert in Blockchain and decentralized applications from Alcalá University

Mr. Gómez Rodríguez, Antonio

- ♦ Principal Cloud Solutions Engineer for Oracle
- ♦ Co-organizer of Málaga Developer Meetup
- ♦ Specialist Consultant for Sopra Group and Everis
- ♦ Team Leader at System Dynamics
- ♦ Software Developer at SGO Software
- ♦ Master's Degree in E-Business from La Salle Business School
- ♦ Postgraduate degree in Information Technologies and Systems from the Catalan Institute of Technology
- ♦ Degree in Telecommunications Engineering from the Polytechnic University of Catalonia

Mr. Pintado San Claudio, Bruno

- ♦ Development Coordinator at IDavinci
- ♦ Java Developer at the National Library of Spain
- ♦ Support developer and N1 network technician in Sanitas
- ♦ Systems support technician at Alcobendas City Council
- ♦ Communications Technician N1 for ADIF at the Atocha Telecommunications Center
- ♦ Graduated in Technical Engineering in Telecommunications, specializing in Electronic Systems from the Polytechnic University of Valencia
- ♦ Graduate in Communications Electronics Engineering at the Polytechnic University of Madrid

Mr. Reyes Oliva, Luis

- ♦ Software and Cloud Architect
- ♦ Development Developer and Cloud Architect at IBM
- ♦ Technical client manager for integrated accounts for BBVA at IBM
- ♦ Cloud and DevOps Architect at IBM
- ♦ Customer Software Architect at Telefónica
- ♦ Technical Solutions Architect at Rational
- ♦ Software Engineering Manager at Borland
- ♦ Project Manager at Altana Consulting
- ♦ Degree in Computer Engineering from the Pontifical University of Salamanca

Mr. Calzada Martínez, Jesús

- ♦ Senior Software Engineer at Devo
- ♦ Full-Stack Developer at Blocknitive
- ♦ Front-End Developer at Infinia
- ♦ Full-Stack Developer at Resem
- ♦ Java Developer at Hitec
- ♦ Degree in Computer Engineering from the Complutense University of Madrid

09

Certificate

The Master's Degree in Front-End and Full-Stack Development guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 **Master's Degree in Front-End and Full-Stack 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.

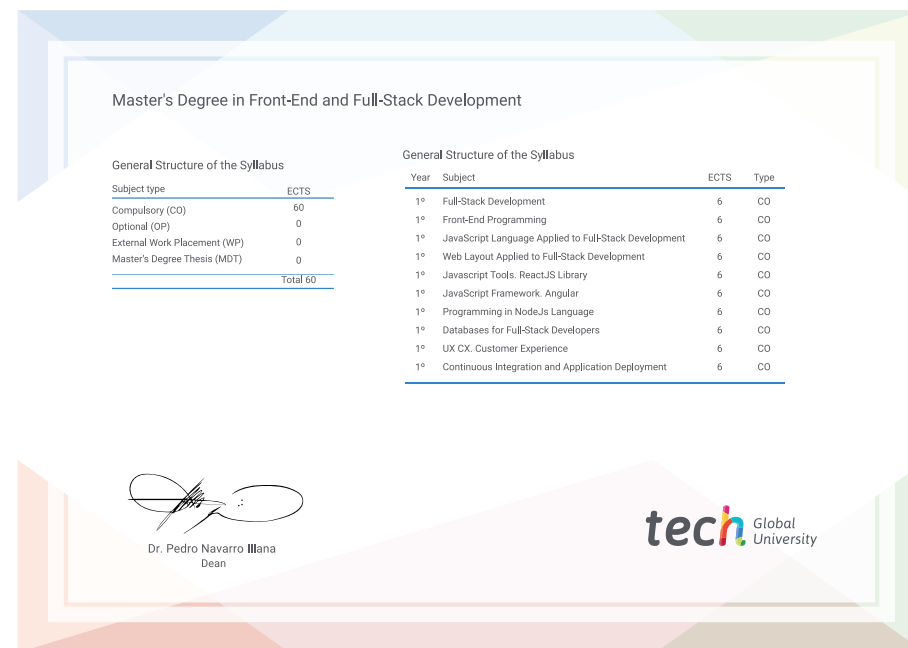
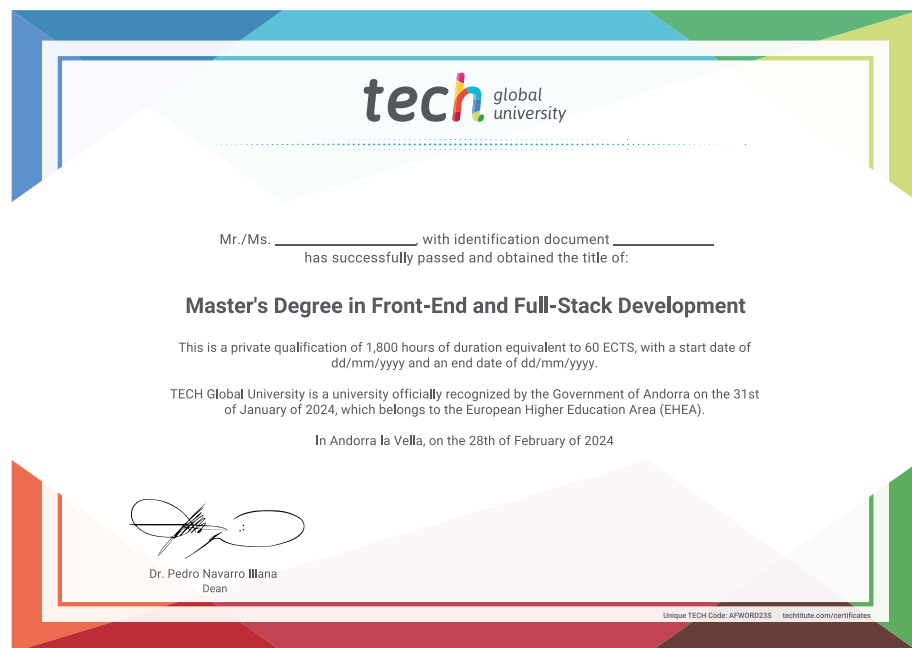
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Master's Degree in Front-End and Full-Stack Development**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**





Master's Degree Front-End and Full- Stack Development

- » Modality: Online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Master's Degree Front-End and Full- Stack Development