Postgraduate Certificate
Programming in NodeJs Language

tech technological university

Postgraduate Certificate
Programming in NodeJs Language

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

Website: **www.techtitute.com/us/information-technology/postgraduate-certificate/programming-nodejs-language**

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01
Introduction

NodeJS has become in recent years one of the most used programming languages for servers. The asynchronous programming makes it a perfect language for applications such as Chats or APIS, making large companies such as LinkedIn, Netflix or Paypal make use of the technology. One of its main advantages is that it allows writing with JavaScript language both client-side and Back End, therefore reducing learning times and costs in development teams. This 100% online program develops the basics of NodeJS, advanced language utilities, event-driven programming, file system access and data streams, among others.

> *Become an essential piece in any web development, leading and coordinating the programming language thanks to this Postgraduate Certificate"*

Currently the high popularity of JavaScript has led to several changes in web development leading to the creation of different frameworks and development environments such as NodeJs. The latter is an open source, cross-platform, real-time execution environment, which is used for the server layer. NodeJs is based on JavaScript and works asynchronously, with an object-oriented architecture and Google's V8 engine.

The current scenario calls for greater challenges in terms of digital education. And in this case, specializing in NodeJS will enrich the computer scientists not only in their current professional work, but will also open new doors to the future. To this end, this program explores the concept and development of this powerful language. The student will delve into the Back-End server, HTTP, Express and Sockets, as well as the creation and containerization of an application with NestJS.

An online Postgraduate Certificate with great flexibility, as there are no on-site classes or fixed schedules. The student will be the one who decides when, where and how to take on the entire course load. All the content of the virtual classroom can be followed from any device with internet connection and is available for download.

This **Postgraduate Certificate in Programming in NodeJs Language** 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 NodeJs language programming
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions for experts and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection

Don't miss the opportunity to pursue a program that will take you to the elite in the development of ambitious IT projects"

You will have access to extensive course material, ranging from the file system and Os to architecture and best practices.

If you are looking for a quality Postgraduate Certificate that will help you improve your education in one of the fields with the most professional opportunities, this is your best option"

You will reach an advanced level of expertise, being able to program any application and web required with NodeJs language.

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

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

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

02
Objectives

The Postgraduate Certificate in Programming in NodeJs Language is designed to facilitate the performance of the professionals in this field and enable them to master the main developments in this area. Therefore, this program updates the computer scientist's knowledge by showing them the latest versions in programming, so that they will be able to develop an application using NodeJs.

TECH's goal is to push you to become the best professional in your sector. For this, we have the best methodology and content"

General Objectives

- Determine how NodeJS works, its installation and configuration
- Discover the language's full potential and advanced features
- Apply best practices to the language
- Assess the acquired skills

You will add quality to your CV by incorporating a multitude of skills and competencies required at the highest levels of programming"
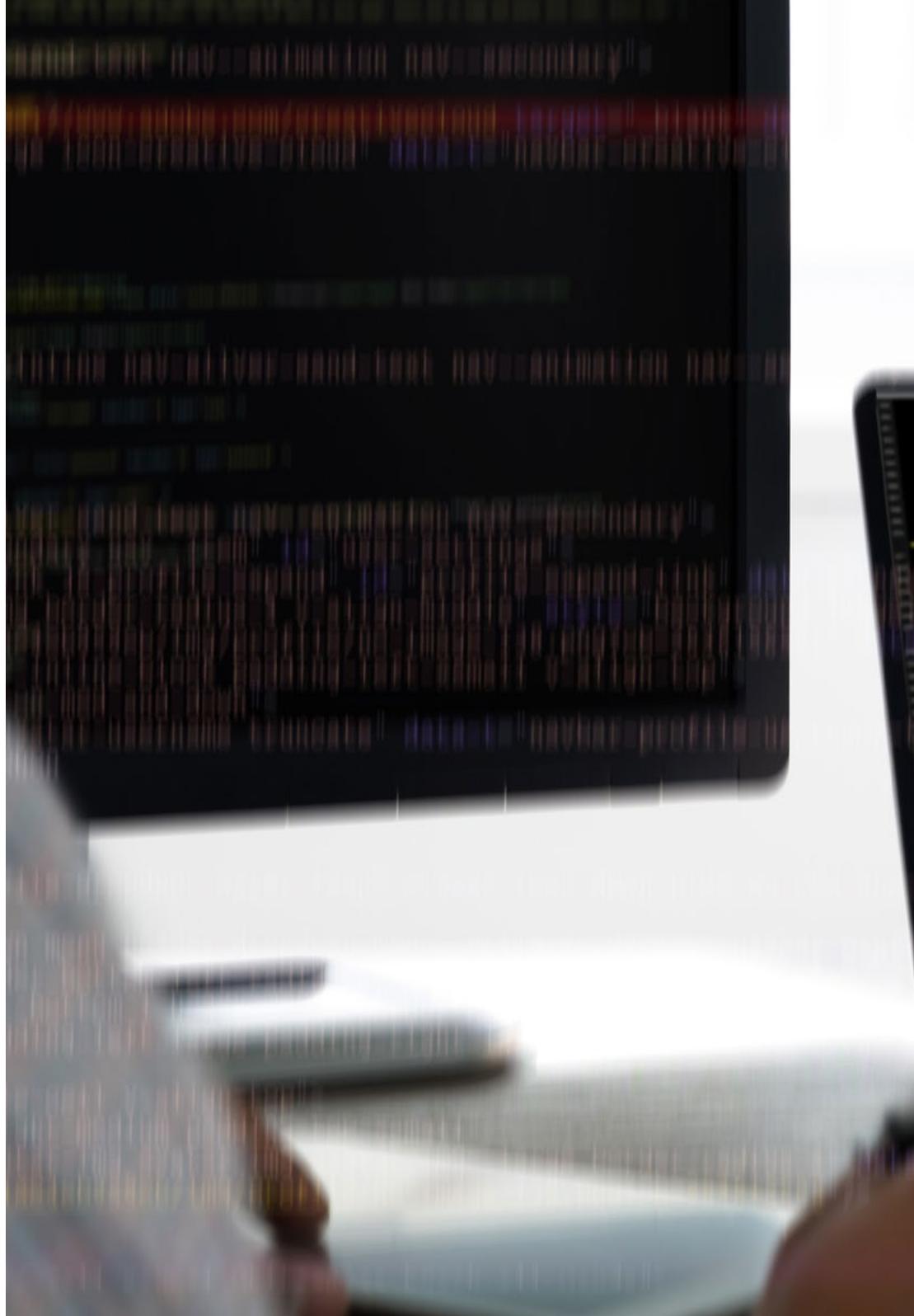
Specific Objectives

- Generate specialized knowledge about JavaScript types and their operators
- Analyze the best ways to program with the language
- Update knowledge to the latest versions
- Explore functional programming
- Develop asynchronous programming and its motivation
- Acquire the ability to build an application with NodeJS
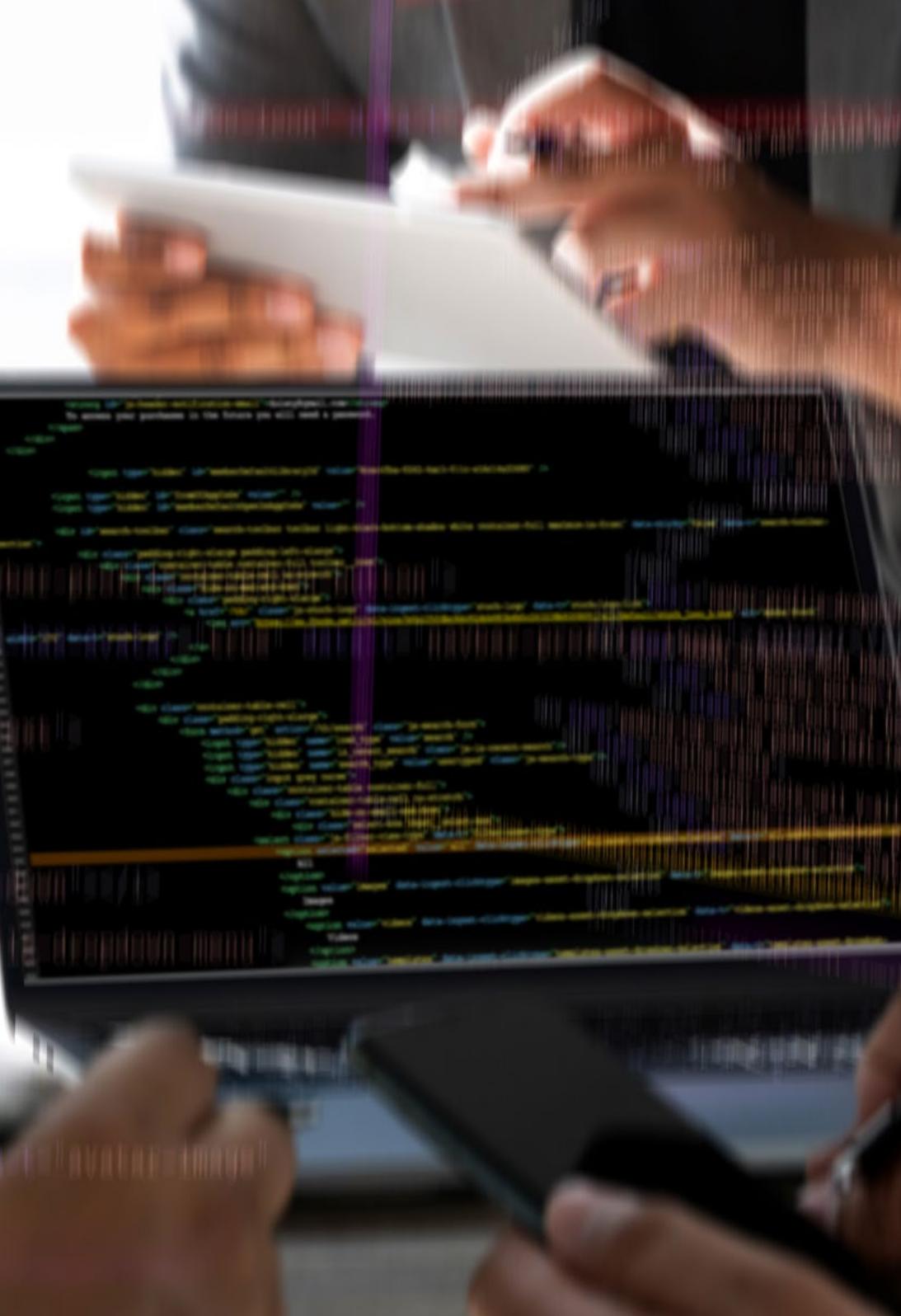
03
Course Management

TECH takes special care in the selection of the teaching staff in charge of its programs in order to offer an elite education For this reason, this Postgraduate Certificate has experts in development and language of web pages and applications. Therefore, this Postgraduate Certificate brings together highly qualified professionals with extensive experience in the sector. The student will find, therefore, a teaching material adapted to their most demanding criteria. In this way, the student will be able to increase programming skills in NodeJs language.

If you have any questions, you can ask for personalized tutoring and consult your doubts"

Management

Mr. Olalla Bonal, Martín

- Senior Blockchain Practice Manager at EY
- Blockchain Client Technical Specialist for IBM
- Director of Architecture for Blocknitive
- Non-Relational Distributed Databases Team Coordinator for wedoIT (IBM Subsidiary)
- Infrastructure Architect at Bankia
- Head of Layout Department at T-Systems
- Department Coordinator for Bing Data Spain S.L.

Professors

Mr. Calzada Martínez, Jesús

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

Structure and Content

With this program, TECH presents to computer scientists a global review of all the aspects that take part in the relationship between the NodeJs language and the creation and development of a web or application. Through first class contents designed by the best professionals of the sector, students will develop their theoretical and practical knowledge, achieving a professional and personal growth that will allow them to intervene in this field of work with the confidence of an expert.

You will have at your disposal real practical cases, complementary readings, detailed videos and many more resources with which to expand on all the topics covered"

Module 1. Programming in NodeJs Language

1.1.   NodeJS and its Architecture
    1.1.1.   NPM and Package Management
    1.1.2.   Executing a Program
    1.1.3.   Modules
    1.1.4.   Creating a Module
    1.1.5.   *Loop* of Events
1.2.   Backend, HTTP, Express and Sockets Server
    1.2.1.   Module HTTP
    1.2.2.   Express
    1.2.3.   Socket.io
1.3.   Database and Cache
    1.3.1.   MongoDB
    1.3.2.   Mongoose
    1.3.3.   SQL
    1.3.4.   Sequelize
    1.3.5.   Redis
1.4.   File System and Os
    1.4.1.   *File System Module*
    1.4.2.   *Os Module*
    1.4.2.   *Cluster module*
1.5.   Eventos, Buffers and Streams
    1.5.1.   Events
    1.5.2.   *Buffers*
    1.5.3.   *Streams*
1.6.   *Testing*
    1.6.1.   Jest
    1.6.2.   Mocha
    1.6.3.   TDD - Cucumber

1.7.   Architecture and Good Practices
    1.7.1.   DRY
    1.7.2.   SOLID
    1.7.3.   CRUD
    1.7.4.   MVC
    1.7.5.   Monoliths
    1.7.6.   Microservices
    1.7.7.   Hexagonal Architecture
1.8.   Typescript
    1.8.1.   Types, Interfaces and Classes
    1.8.2.   Functions and Modules
    1.8.3.   Generics
    1.8.4.   Namespaces
    1.8.5.   Decorators
1.9.   REST API
    1.9.1.   GET
    1.9.2.   POST
    1.9.3.   PUT
    1.9.4.   DELETE
    1.9.5.   Swagger
    1.9.6.   Building a Rest API with Express
1.10.   Creation and Containerization of an Application with NestJS
    1.10.1.   Nest CLI
    1.10.2.   Docker
    1.10.3.   Building an Application

" *Thanks to the contents to which you will have access and the practical cases that you will develop during the program, you will have a support when facing real situations"*

05
Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

" *At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"*

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

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

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

30%

10%

8%

20%

25%

4%

3%
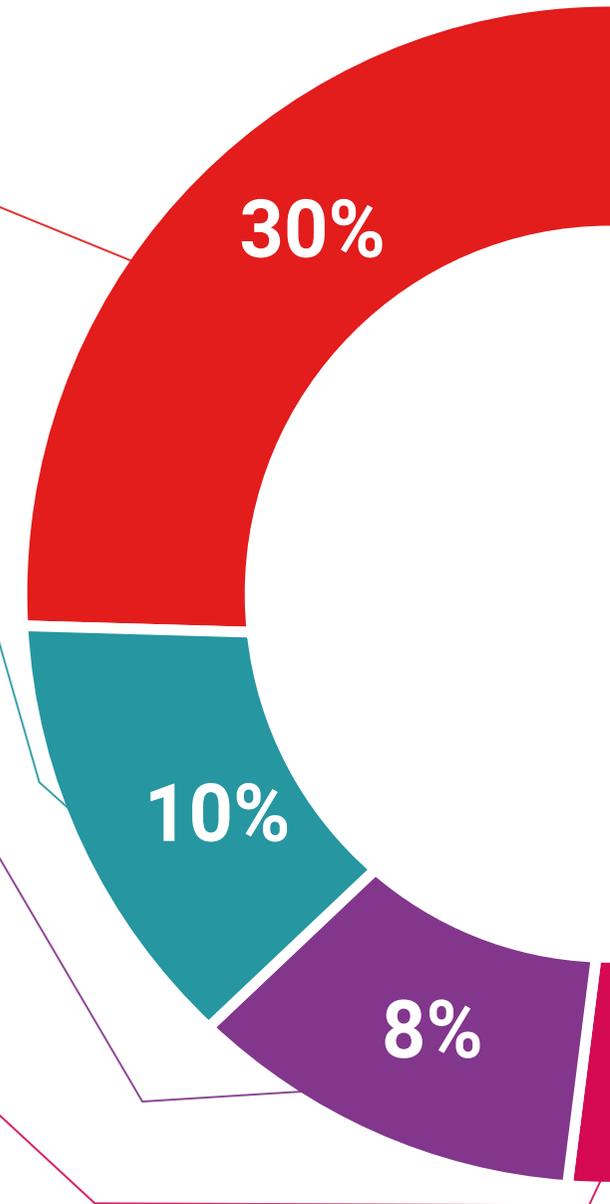
Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

06

Certificate

The Postgraduate Certificate in Programming in NodeJs Language guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

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

This **Postgraduate Certificate in Programming in NodeJs Language** contains the most complete and up-to-date program on the market.

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

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Programming in NodeJs Language**
Official Nº of Hours: **150 h.**

tech technological
university

Awards the following

DIPLOMA
to
Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE CERTIFICATE
in

Programming in NodeJs Language

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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