

# Postgraduate Certificate Data Management





## Postgraduate Certificate Data Management

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online
- » Target Group: Computer engineers who wish to reorient their work towards the world of business intelligence, or established professionals in the field of BI who need to update, deepen and improve their skills and knowledge

Website: [www.techtute.com/in/school-of-business/postgraduate-certificate/data-management](http://www.techtute.com/in/school-of-business/postgraduate-certificate/data-management)

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# 01 Welcome

Data has always been the fundamental raw material for research and the advancement of knowledge. Nowadays, data knowledge has become the backbone in any field and is, without a doubt, the main protagonist of this era, so the study of it is of vital importance and in great demand in the labor market given the information it provides to institutions and businesses.

Therefore, this program develops an advanced knowledge of data management, focusing on its typology and life cycle and practical approach through the available resources. Throughout the program, the model for optimal data management, which covers all its stages and processes, is analyzed through practical case studies. In this way, the student is able to establish the conditions that must be met to optimize the use and quality of data today.



Postgraduate Certificate in Data Management. TECH Technological University





“

*Reach your work goal by analyzing tools and methods for the manipulation and better use of data, the great protagonist of the 21st century, responsible for the success of corporations"*

02

# Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class centre for intensive managerial skills training.



“

*TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"*

## At TECH Technological University



### Innovation

The university offers an online learning model that combines the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



### The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

**95%** | of TECH students successfully complete their studies



### Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

**100,000+**  
executives trained each year

**200+**  
different nationalities



### Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

**500+** | collaborative agreements with leading companies



### Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



### Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



### Analysis

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TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



### Academic Excellence

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TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding academic itinerary.



### Economy of Scale

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TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a groundbreaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.



### Learn with the best

---

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



*At TECH, you will have access to the most rigorous and up-to-date case studies in the academic community"*

03

# Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.







“

*We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you training of the highest academic level"*

This program will provide students with a multitude of professional and personal advantages, particularly the following:

**01**

### A significant career boost

---

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

*70% of participants achieve positive career development in less than 2 years.*

**02**

### Develop a strategic and global vision of companies

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TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional areas.

*Our global vision of companies will improve your strategic vision.*

**03**

### Consolidate the student's senior management skills

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Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

*You will work on more than 100 real senior management cases.*

**04**

### Take on new responsibilities

---

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

*45% of graduates are promoted internally.*

05

### Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

*You will find a network of contacts that will be instrumental for professional development.*

06

### Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different areas in companies.

*20% of our students develop their own business idea.*

07

### Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

*Improve your communication and leadership skills and enhance your career.*

08

### Be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified professors from the most prestigious universities in the world: the TECH Technological University community.

*We give you the opportunity to train with a team of world renowned teachers.*

# 04 Objectives

This program is designed to strengthen the student's skills in data management, in addition to developing new skills that will be essential in their professional development and job success focused on the digital and technological environment. At the end of the program, the professional will be able to elaborate a correct Data Management, establishing the conditions that must be fulfilled to optimize the use and quality of the data. All this from an innovative perspective and with a unique business vision focused on corporate data management.



“

*Develop skills related to data exploration and modeling (with R) and position yourself in a future-oriented environment”*



TECH makes the objectives of its students its own.  
Working together to achieve them.

The **Postgraduate Certificate in Data Management** enables students to:

01

Develop advanced concepts related to data

02

Determine each stage of the data life cycle

03

Establish the conditions to be met to optimize  
the use and quality of the data







04

Develop skills related to data exploration and modeling (with R)

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05

Develop expertise in data analysis

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06

Handle data correctly and be able to communicate it in an optimal way

05

# Structure and Content

The content of the Postgraduate Certificate in Data Management is an exceptional program that challenges the professional by directing their attention to success in this competitive environment based on the possibilities offered by business intelligence tools focused on data management. It is a program that has been structured in such a way that the student not only acquires all the knowledge and skills they need, but it is also a unique and stimulating experience that will take them to the top of their professional capacity in the data environment, becoming a key figure in any company today.



“

*Learn to analyze tools and methods for the manipulation and better utilization of data, for the delivery of understandable results to the final recipient”*

## Syllabus

The Postgraduate Certificate in Data Management at TECH Technological University is an intensive program that prepares students to face challenges and strategic decisions in the corporate environment with business intelligence tools, that is, data management. Therefore, the content of the program is designed to make use of the possible applications of Business Intelligence (BI) in the enterprise.

Throughout 150 hours of preparation, the student analyzes a multitude of practical cases through individual work and teamwork. It is, therefore, an authentic immersion in real business situations.

In this way, this Postgraduate Certificate deals in depth with the concept of data Management to implement it in business management so that it brings positive results to the company, from a disruptive, complete and up-to-date perspective, focused on solving the real needs of the business world. It is designed to specialize professionals who understand the data world with a strategic, international and innovative approach.

A syllabus fully designed for the student, focused on their professional improvement, preparing them to achieve excellence. A program that understands both the needs of the student and the company, through innovative content based on the latest trends, supported by the best educational methodology and an exceptional faculty.

This Postgraduate Certificate is developed over 6 week and is divided into 1 module:

### Module 1

### Data Management



### Where, when and how is it taught?

TECH offers its students the possibility of taking this program completely online. Throughout the six week of training, they will be able to access all the program contents at any time, allowing them to self-manage their own study time.

*A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.*

**Module 1. Data Management**

**1.1. Statistics**

- 1.1.1. Statistics: Descriptive Statistics, Statistical Inferences
- 1.1.2. Population, Sample, Individual
- 1.1.3. Variables: Definition, Measurement Scales

**1.2. Types of Data Statistics**

- 1.2.1. According to Type
  - 1.2.1.1. Quantitative: Continuous Data and Discrete Data
  - 1.2.1.2. Qualitative: Binomial Data, Nominal Data and Ordinal Data
- 1.2.2. According to Its Form: Numerical, Text, Logical
- 1.2.3. According to Source: Primary, Secondary

**1.3. Data Management Planning**

- 1.3.1. Definition of Objectives
- 1.3.2. Determination of Available Resources
- 1.3.3. Establishment of Time Lapses
- 1.3.4. Data Structure

**1.4. Data Collection**

- 1.4.1. Methodology of Data Collection
- 1.4.2. Data Collection Tools
- 1.4.3. Data Collection Channels

**1.5. Data Cleaning**

- 1.5.1. Phases of Data Cleansing
- 1.5.2. Data Quality
- 1.5.3. Data Manipulation (with R)

**1.6. Data Analysis, Interpretation and Evaluation of Results**

- 1.6.1. Statistical Measures
- 1.6.2. Relationship Indices
- 1.6.3. Data Mining

**1.7. Data Visualization**

- 1.7.1. Suitable Display According to Data Type
- 1.7.2. End-User Considerations
- 1.7.3. Executive Models of Results Presentation

**1.8. Data Warehouse (Datawarehouse)**

- 1.8.1. Elements that Comprise it
- 1.8.2. Design
- 1.8.3. Aspects to Consider

**1.9. Data Availability**

- 1.9.1. Access
- 1.9.2. Uses
- 1.9.3. Security

**1.10. Practical Application**

- 1.10.1. Data Exploration
- 1.10.2. Manipulation and Adjustment of Patterns and Structures
- 1.10.3. Test Application and Modeling





“

*A quality online syllabus adapted to your way of life so that you can study where, when and how you want"*

# 06

# 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"*

## TECH Business School uses the 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*”



*This program prepares you to face business challenges in uncertain environments and achieve business success.*





## A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.

“

*You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments”*

The case method has been the most widely used learning system among the world's leading business 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

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

## 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.

*Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.*

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 online business school is the only one in the world licensed to incorporate 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.

With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.



### Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



### 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 senior management 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.



07

# Our Students' Profiles

The Postgraduate Certificate in Data Management is aimed at computer engineers who wish to reorient their work towards the world of business intelligence, or established professionals in the field of BI and data who need to update, deepen and improve their skills and knowledge.

On the other hand, the diversity of participants with different academic profiles and from multiple nationalities makes up the multidisciplinary approach of this program, with global involvement.

In addition, professionals with a degree in any area and two years of work experience in the field of BI, data or business may also study the Postgraduate Certificate.





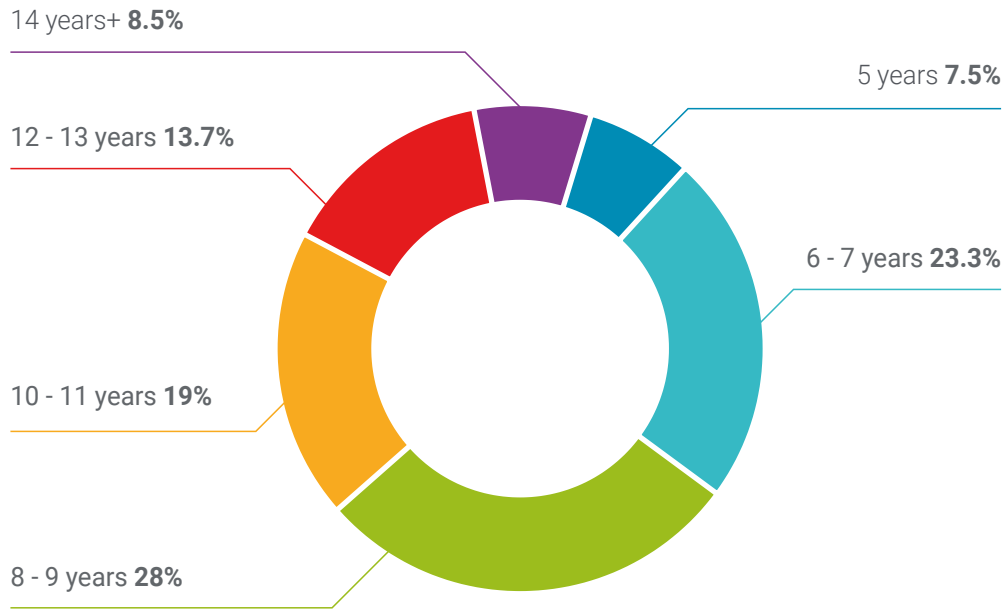
“

*If you are looking to establish effective data access and reuse policies and learn in a short time, this Postgraduate Certificate is for you”*

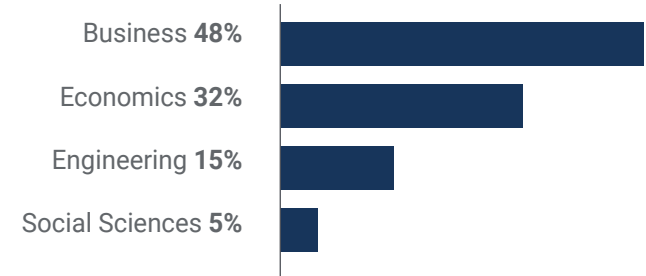
### Average Age

Between **35** and **45** years old

### Years of Experience



### Training



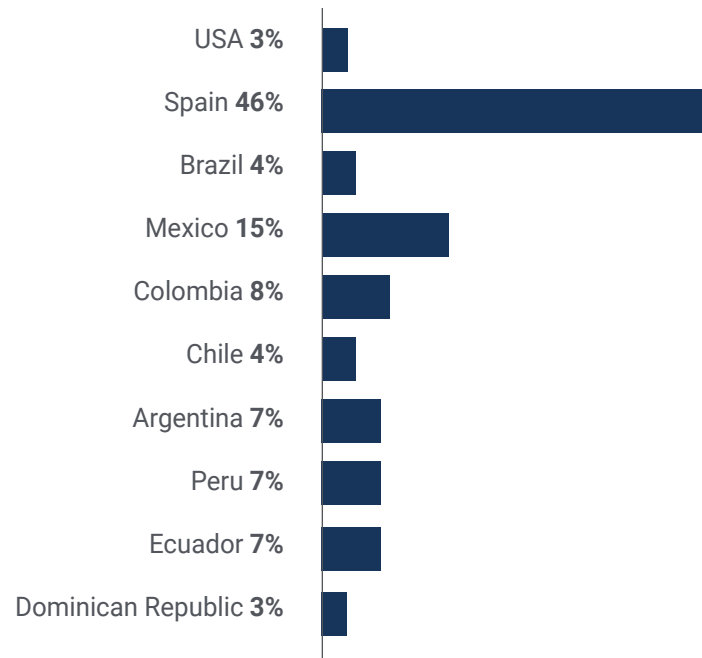
### Academic Profile





## Geographical Distribution

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## Rodrigo Campillo

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CEO

*"By specializing in Data Management I have been able to focus on its typology and analyze its life cycle in an easy way, addressing a practical approach to the resources available to my business. And all thanks to the guidelines of this program. I highly recommend it"*

08

# Course Management

This Postgraduate Certificate in Data Management has a select group of experts with multiple years of experience. Therefore, together, they have created a program that will enhance the students' skills in a practical and educational way.





“

*It is the best time to learn! The program has an excellent faculty"*

## International Guest Director

Mick Gram is synonymous with innovation and excellence in the field of Business Intelligence internationally. His successful career is linked to leadership positions in multinationals such as Walmart and Red Bull. Likewise, this expert stands out for his vision to identify emerging technologies that, in the long term, achieve an everlasting impact in the corporate environment.

On the other hand, the executive is considered a pioneer in the use of data visualization techniques that simplified complex sets, making them accessible and facilitating decision making. This ability became the pillar of his professional profile, transforming him into a desired asset for many organizations that bet on gathering information and generating concrete actions from them.

One of his most outstanding projects in recent years has been the Walmart Data Cafe platform, the largest of its kind in the world that is anchored in the cloud aimed at Big Data analysis. In addition, he has held the position of Director of Business Intelligence at Red Bull, covering areas such as Sales, Distribution, Marketing and Supply Chain Operations. His team was recently recognized for its constant innovation regarding the use of Walmart Luminare's new API for Shopper and Channel insights.

In terms of education, the executive has several Master's degrees and postgraduate studies at prestigious centers such as the University of Berkeley, in the United States, and the University of Copenhagen, in Denmark. Through this continuous updating, the Postgraduate Diploma has achieved cutting-edge competencies. Thus, he has come to be considered a born leader of the new global economy, centered on the impulse of data and its infinite possibilities.



## Mr. Gram, Mick

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- Business Intelligence Solutions Architect for Walmart Data Café
- Independent Business Intelligence and Data Science Consultant
- Business Intelligence Director at Capgemini
- Chief Analyst at Nordea
- Chief Business Intelligence Consultant for SAS
- Executive Education in AI and Machine Learning at UC Berkeley College of Engineering
- Executive MBA in e-commerce at the University of Copenhagen
- Bachelor's Degree and Professional Master's Degree in Mathematics and Statistics at the University of Copenhagen

“

*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### **Dr. Peralta Martín-Palomino, Arturo**

- ♦ CEO and CTO at Prometheus Global Solutions
- ♦ CTO en Corporate Technologies in Corporate Technologies
- ♦ CTO in AI Shephers GmbH
- ♦ Doctorate in Psychology from the University of Castilla-La Mancha
- ♦ PhD in Economics, Business and Finance from the Camilo José Cela University. Outstanding Award in her PhD
- ♦ PhD in Psychology, University of Castilla-La Mancha
- ♦ Master's Degree in Advanced Information Technologies from the University of Castilla-La Mancha
- ♦ Master MBA+E (Master's Degree in Business Administration and Organisational Engineering) from the University of Castilla-La Mancha
- ♦ Associate lecturer, teaching undergraduate and master's degrees in Computer Engineering at the University of Castilla-La Mancha
- ♦ Professor of the Master in Big Data and Data Science at the International University of Valencia
- ♦ Lecturer of the Master's Degree in Industry 4.0 and the Master's Degree in Industrial Design and Product Development
- ♦ Member of the SMILe Research Group of the University of Castilla-La Mancha





## Professors

### Dr. Fernández Meléndez, Galina

- ◆ Data Analyst in ADN Mobile Solution
- ◆ ETL processes, data mining, data analysis and visualisation, establishment of KPI's, Dashboard design and implementation, management control. ADN Mobile Solution-Gijón-Spain R development, SQL management, among others
- ◆ Pattern determination, predictive modelling, machine learning
- ◆ Bachelor's degree in Business Administration. Bicentennial University of Aragua- Caracas- Diploma in Planning and Public Finance. Venezuelan School of Planning, School of Finance
- ◆ Professional Master's Degree in Data Analysis and Business Intelligence. University of Oviedo
- ◆ MBA in Business Administration and Management (Escuela De Negocios Europea De Barcelona)
- ◆ Master in Big Data and Business Intelligence (Escuela de Negocios Europea de Barcelona)

09

# Impact on Your Career

TECH is aware that studying a program like this entails great economic, professional and, of course, personal investment. The ultimate goal of this studying this program should be to achieve professional growth in the data field. TECH is committed to helping students achieve this objective through the design of competitive programs with the best experts in the sector.





“

*Unifying diverse data or achieving consistency of information will be two of your objectives in this Postgraduate Certificate, with which you will be able to produce relevant information that is effective for strategic decision making”*

### Are you ready to take the leap? Excellent professional development awaits

TECH's Postgraduate Certificate in Data Visualization is an intensive program that prepares students to face challenges and business decisions in a competitive environment full of strategies, metadata and the latest advances in technology to boost the management of a company through Business Intelligence and Artificial Intelligence.

Therefore, its purpose is to promote the personal and professional growth of the student so that they may prosper in this field of work.

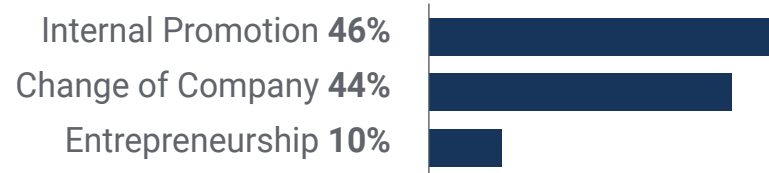
*In this TECH Postgraduate Certificate, you will learn how to determine the best practices for data management according to their typology and uses.*

*If you are a data analyst and want to increase your skills in this field, do not hesitate and study this program in Data Management.*

### When the change occurs



### Type of change



### Salary increase

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This program represents a salary increase of more than **25%** for our students.





10

# Benefits for Your Company

The Postgraduate Certificate in Data Management contributes to elevate the organization's talent to its maximum potential by training high-level leaders. Studying this Postgraduate Certificate is, therefore, a unique opportunity to access a powerful network of contacts in which to find future professional partners, customers or suppliers thanks to the possibilities offered by Data Management today.



“

*With this TECH Postgraduate Certificate, the professional will provide the company with new concepts, strategies and perspectives with which to improve the data management of a company"*

Developing and retaining talent in companies is the best long-term investment.

01

### Intellectual Capital and Talent Growth

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.

---

02

### Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.

03

### Building agents of change

Be able to make decisions in times of uncertainty and crisis, helping the organization to overcome obstacles.

---

04

### Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.



05

### Project Development

The professional can work on a real project or develop new projects in the field of BI, Big Data or data analysis.

---

06

### Increased competitiveness

This Postgraduate Certificate will equip your professionals with the skills to take on new challenges and thus drive the organization forward.

11

# Certificate

The Postgraduate Certificate the Data Management 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 Data Management** contains the most complete and up-to-date educational 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 certificate 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 Data Management**

Official N° of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION 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 language  
virtual classroom



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