



Postgraduate Diploma Business Data Analysis

Language: English

Course Modality: Online

Duration: 6 months

Certificate: TECH Technological University

Official N° of Hours: 450 h.

Target Group: University graduates and postgraduates who have completed a degree in computer engineering.

Website: www.techtitute.com/in/school-of-business/postgraduate-diploma/postgraduate-diploma-business-data-analysis

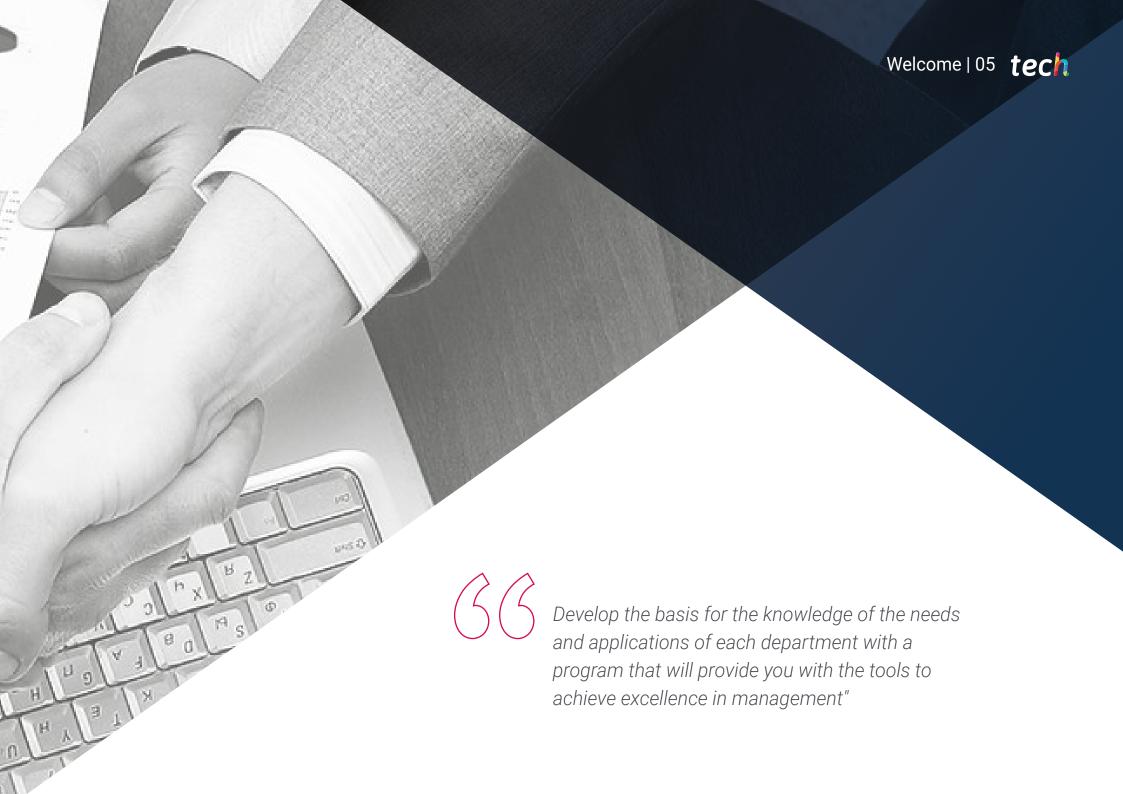
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01 **Welcome**

Today, companies are in a race to achieve digital transformation. Those that succeed are the ones that manage to perform quality information processing, managing data and making the most of all resources to make quick and accurate decisions. In this regard, more and more business professionals need to master a set of tools to analyze and interpret data properly. For this reason, a program has been developed to prepare them to determine the importance of using a good data analytics system in the company, where each department can benefit and obtain improvements in results, as well as an increase in productivity. All this will be essential to lead work teams that achieve excellence.









tech 08 | Why Study at TECH?

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+

200+

executives trained each year

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.



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"

Why Study at TECH? | 09 **tech**

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



Analysis

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



Academic Excellence

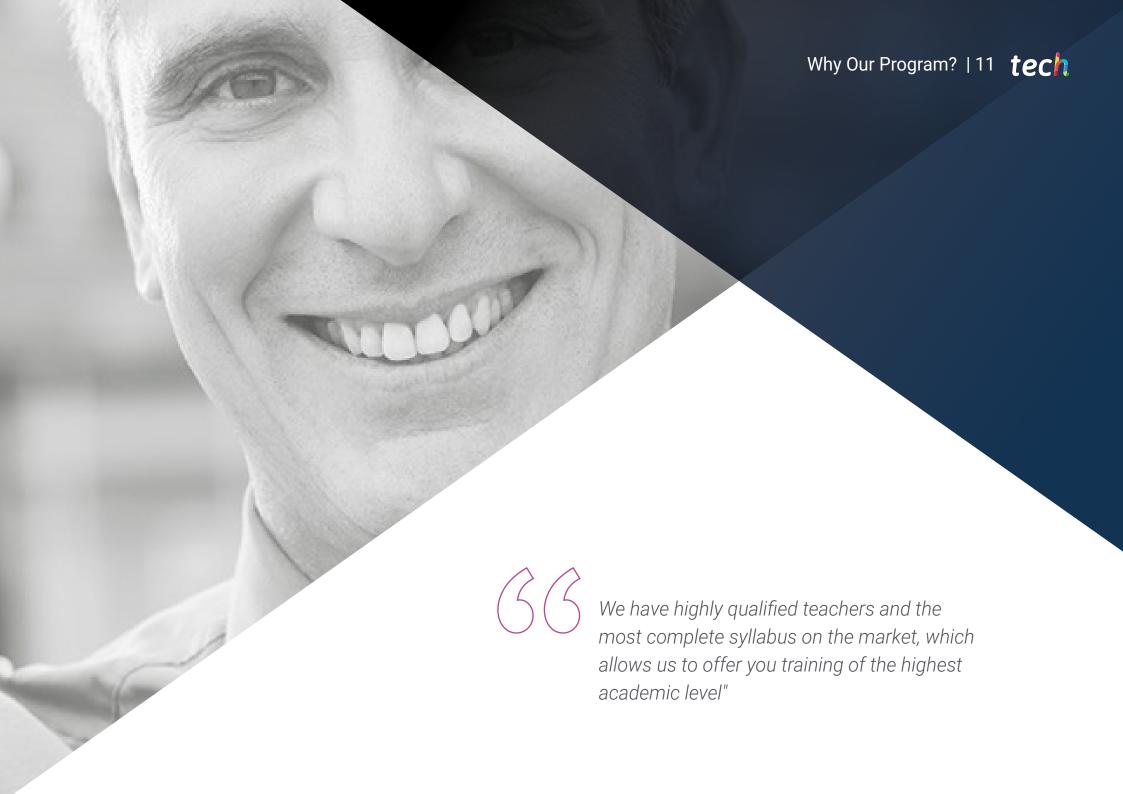
TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding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



Economy of Scale

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 ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.





tech 12 | Why Our Program?

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



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.



Develop a strategic and global vision of companies

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.



Consolidate the student's senior management skills

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.



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.



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.



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.



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.



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.

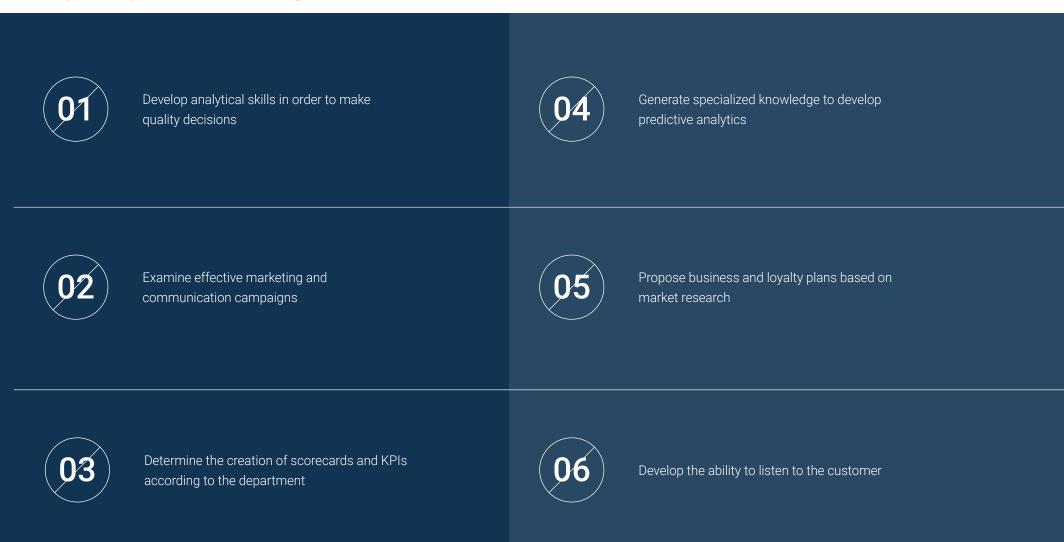




tech 16 | Objectives

TECH makes the goals of their students their own goals too. Working together to achieve them.

The Postgraduate Diploma in Business Data Analysis qualifies students to:







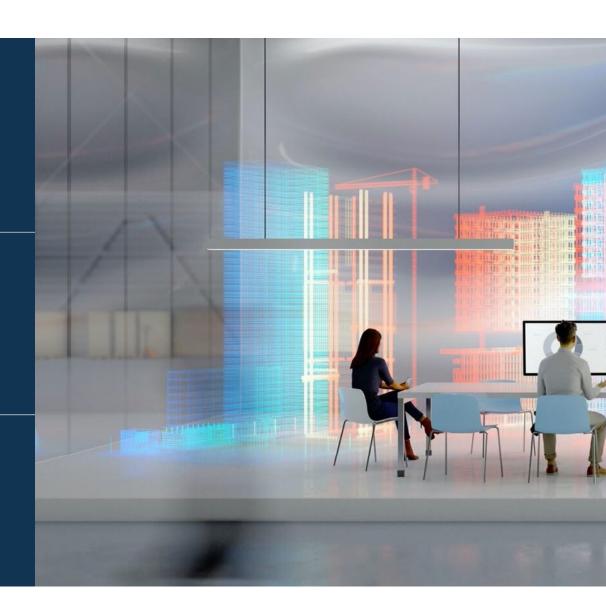
Analyze the different software tools for graphing and exploratory data analysis



Analyze time series



Develop the formulation and basic properties of univariate time series models







Examine the methodology of modeling and prediction of real time series



Determine univariate models including outliers



Apply dynamic regression models and apply the methodology for the construction of such models from observed series





tech 22 | Structure and Content

Syllabus

The Postgraduate Diploma in Business Data Analysis from TECH Technological University has an up-to-date syllabus according to the demands of the labor market, providing the fundamental knowledge to face managerial challenges in the IT departments of companies.

The entire content of the program is designed to enhance the theoretical and managerial skills of business professionals interested in the problems involved in analyzing and interpreting huge amounts of information.

Throughout 450 hours of learning, the students will understand the key concepts to advance in their professional career, determining the creation of scorecards and KPIs according to the department. Therefore, it is an immersion of real business situations in the academic classroom.

This Postgraduate Diploma will help to analyze each department defining the most important needs and applications in each of them, as well as the objectives to be achieved through data analytics in an efficient way. It will also cover the different types of data, the most useful representations and the different data representation programs.

Based on the above, the syllabus will be complemented with the teaching of models that are more versatile and adaptable for the analysis of time series, such as the models associated with economic series. In this way, it becomes a syllabus that meets the needs of students and prepares them to face any professional challenge at the business level.

This Postgraduate Diploma takes place over 6 months and is divided into 3 modules:

Module 1 Data Analysis in a Business Organization

Module 2 Graphical Representation of Data Analysis

Module 3 Predictability and Analysis of Stochastic Phenomena



Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Diploma in Business Data Analysis completely online. Over the course of 6 months, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

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

tech 24 | Structure and Content

Production Department

1.9.2. Applications 1.9.3. Benefits

Module 1. Data Analysis in a Business Organization Data Analysis in the Business 1.3. Marketing and Communication 1.1. Business Analysis 1.4. Commerce and Sales 1.1.1. Business Analysis 1.2.1. Scorecards and KPIs by Department 1.3.1. KPIs to be Measured, Applications 1.4.1. Contributions of Data Analytics in the and Benefits 1.1.2. Data Structure 1.2.2. Operational, Tactical and Strategic Reports Commercial Area 1.3.2. Marketing Systems and *Data Warehouse* 1.3.3. Implementation of a Data Analytics 1.1.3. Phases and Elements 1.2.3. Data Analytics Applied to Each 1.4.2. Needs of the Sales Department Department 1.4.3. Market Research Framework in Marketing 1.2.3.1. Marketing and Communication 1.3.4. Marketing and Communication Plan 1.2.3.2. Commercial 1.3.5. Strategies, Prediction and 1.2.3.3. Customer Service Campaign Management 1.2.3.4. Purchasing 1.2.3.5. Administration. 1.2.3.6. HR 1.2.3.7. Production 1.2.3.8. IT 1.5. Customer Service 1.6. Purchasing 1.7. Administration 1.8. Human Resources 1.8.1. HR and the Benefits of Data Analysis 1.5.1. Loyalty 1.6.1. Data Analysis for Market Research 1.7.1. Needs of the Administration 1.8.2. Data Analytics Tools in the HR Department 1.6.2. Data Analysis for Competency 1.5.2. Personal Coaching and Department 1.8.3. Data Analytics Applications in Emotional Intelligence 1.7.2. Data Warehouse and Financial Research the HR Department 1.5.3. Customer Satisfaction 1.6.3. Other Applications Risk Analysis 1.7.3. Data Warehouse and Credit Risk Analysis 1.9. Production 1.10. IT 1.9.1. Data Analysis in a 1.10.1. IT Department

1.10.2. Data Analysis and Digital Transformation

1.10.3. Innovation and Productivity

 2.1. Exploratory Analysis 2.1.1. Representation for Information Analysis 2.1.2. The Value of Graphical Representation 2.1.3. New Paradigms of Graphical Representation 	2.2. Optimization for Data Science2.2.1. Color Range and Design2.2.2. Gestalt in Graphic Representation2.2.3. Errors to Avoid and Advice	2.3. Basic Data Sources2.3.1. For Quality Representation2.3.2. For Quantity Representation2.3.3. For Time Representation	2.4.2.	Complex Data Sources Files, Lists and Databases Open Data Continuous Data Generation
2.5. Types of Graphs 2.5.1. Basic Representations 2.5.2. Block Representation 2.5.3. Representation for Dispersion Analysis 2.5.4. Circular Representations 2.5.5. Bubble Representations 2.5.6. Geographical Representations	2.6. Types of Visualization2.6.1. Comparative and Relational2.6.2. Distribution2.6.3. Hierarchical	 2.7. Report Design with Graphic Representation 2.7.1. Application of Graphs in Marketing Reports 2.7.2. Application of Graphs in Scorecards and KPIs 2.7.3. Application of Graphs in Strategic Plans 2.7.4. Other Uses: Science, Health, Business 		· ·
2.9. Tools Oriented Towards Visualization	2.10. New Technologies in Data Visualization			
2.9.1. Advanced Tools 2.9.2. Online Software 2.9.3. Open Source	2.10.1. Systems for Virtualization of Reality 2.10.2. Reality Enhancement and Improvement Systems 2.10.3. Intelligent Systems			

Module 3. Predictability and Analysis of Stochastic Phenomena 3.1. Time Series 3.2. Time Series 3.3. Typology 3.4. Time Series Schemes 3.2.1. Trend Seasonality of ST 3.2.2. Typical Variations 3.1.1. Time Series 3.3.1. Stationary 3.4.1. Additive Scheme (Model) 3.4.2. Multiplicative Scheme (Model) 3.1.2. Utility and Applicability 3.3.2. Non-Stationary 3.1.3. Related Case Studies 3.3.3. Transformations and Settings 3.2.3. Waste Analysis 3.4.3. Procedures to Determine the Type of Model **Basic Forecast Methods** 3.6. Waste Analysis 3.7. Regression in the Context of 3.8. Predictive Methods of Time Series Time Series 3.5.1. Media 3.6.1. Autocorrelation 3.5.2. Naive 3.6.2. ACF of Waste 3.8.2. Exponential Smoothing 3.7.1. ANOVA 3.5.3. Seasonal Naive 3.6.3. Correlation Test 3.7.2. Fundamentals 3.5.4. Comparison of Methods 3.7.3. Practical Application 3.9. Manipulation and Analysis of Time 3.10. Combined Graphical Analysis Series with R with R 3.9.1. Data Preparation 3.10.1. Normal Situations 3.9.2. Identification of Patterns 3.10.2. Practical Application for the Resolution of 3.9.3. Model Analysis Simple Problems 3.10.3. Practical Application for Advanced 3.9.4. Prediction Problem Solving



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.





tech 28 | Methodology

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.





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



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

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.

tech 30 | Methodology

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.



Methodology | 31 tech

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.





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

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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.



30%



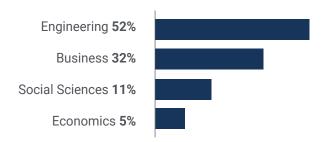


tech 36 | Our Students' Profiles

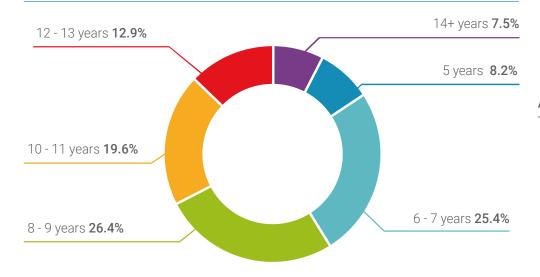
Average Age

Between 35 and 45 years old

Training



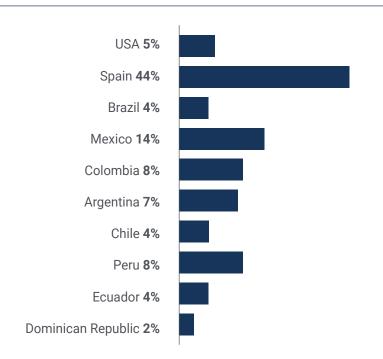
Years of Experience



Academic Profile



Geographical Distribution





Julio García

Business Analyst

"With this program, I have been able to develop my skills to understand the different data used in the multiple departments of the company where I work. This Postgraduate Diploma, has become a point of professional transformation"





tech 40 | Course Management

Management



Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO en Corporate Technologies in Corporate Technologies
- CTO in Al 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
- 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

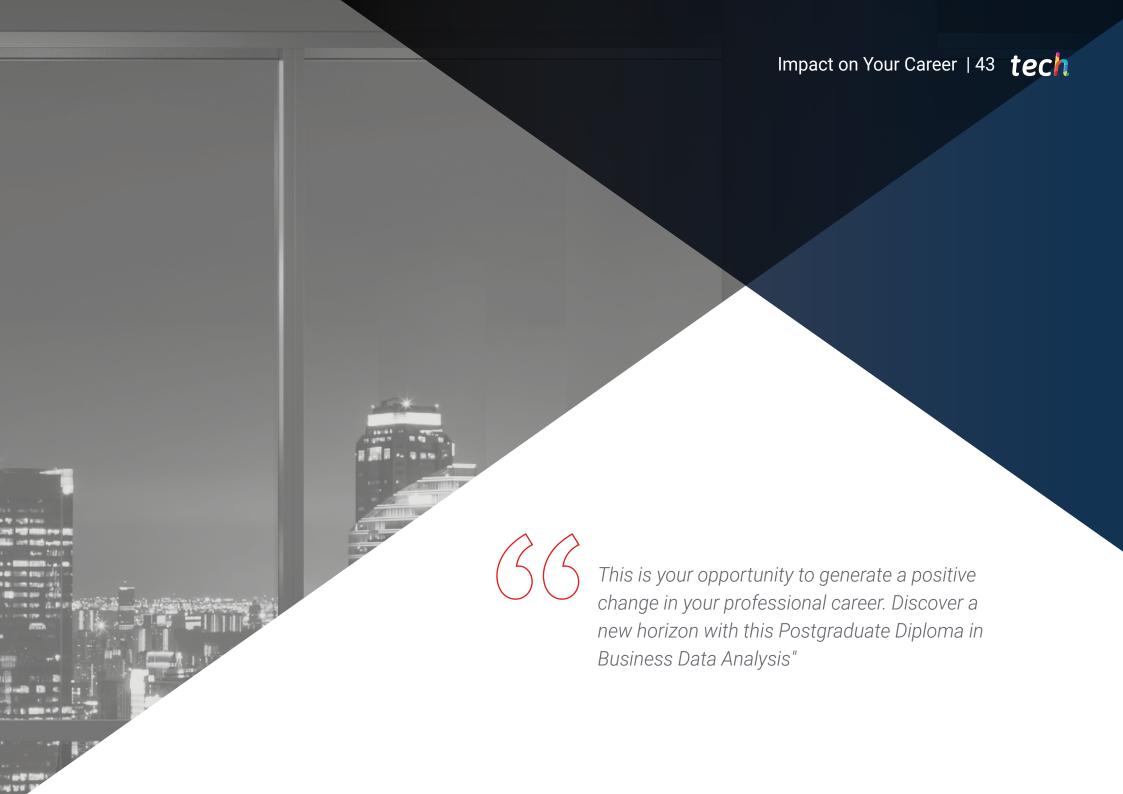
Ms. Martínez Cerrato, Yésica

- Electronic Security Product Technician at Securitas Security Spain
- Business Intelligence Analyst at Ricopia Technologies (Alcalá de Henares) Degree in Electronic Communications Engineering at the Polytechnic School, University of Alcalá
- Responsible for training new recruits on commercial management software (CRM, ERP, INTRANET), product and procedures in Ricopia Technologies (Alcalá de Henares)
- Responsible for training new scholarship holders incorporated to the Computer Classrooms at the University of Alcalá
- Project Manager in the area of Key Accounts Integration at Correos and Telégrafos (Madrid)
- Computer Technician-Responsible for computer classrooms OTEC, University of Alcalá (Alcalá de Henares)
- Computer classes teacher at ASALUMA Association (Alcalá de Henares).
- Scholarship for training as a Computer Technician in OTEC, University of Alcala (Alcalá de Henares)

Ms. Fernández Meléndez, Galina

- Data Analyst in ADN Mobile Solution
- ETL processes, data mining, data analysis and visualization, establishment of KPIs, Dashboard design and implementation, management control. R development, SQL management, among others.
- · Pattern determination, predictive modelling, machine learning
- Bachelor's degree in Business Administration. Bicentenaria de Aragua-Caracas University
- Certificate 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 (European Business School of Barcelona)





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

TECH's Postgraduate Diploma in Business Data Analysis is an intensive program that prepares future graduates to address business challenges and decisions in the field of data analysis. The main objective is to promote personal and professional growth. Helping students achieve success.

If you want to improve yourself, make a positive change professionally and network with the best, this is the place for you.

Invest in yourself and study with TECH. You will notice how you improve right from the first class.

If you want to make a positive change in your profession, this program will help you achieve it.

When the change occurs



Type of change



Salary increase

This program represents a salary increase of more than 25.33% for our students.

\$22,900

A salary increase of

25.33%

\$28,700





tech 48 | Benefits for Your Company

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



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.



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.



Building agents of change

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



Increased international expansion possibilities

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







Project Development

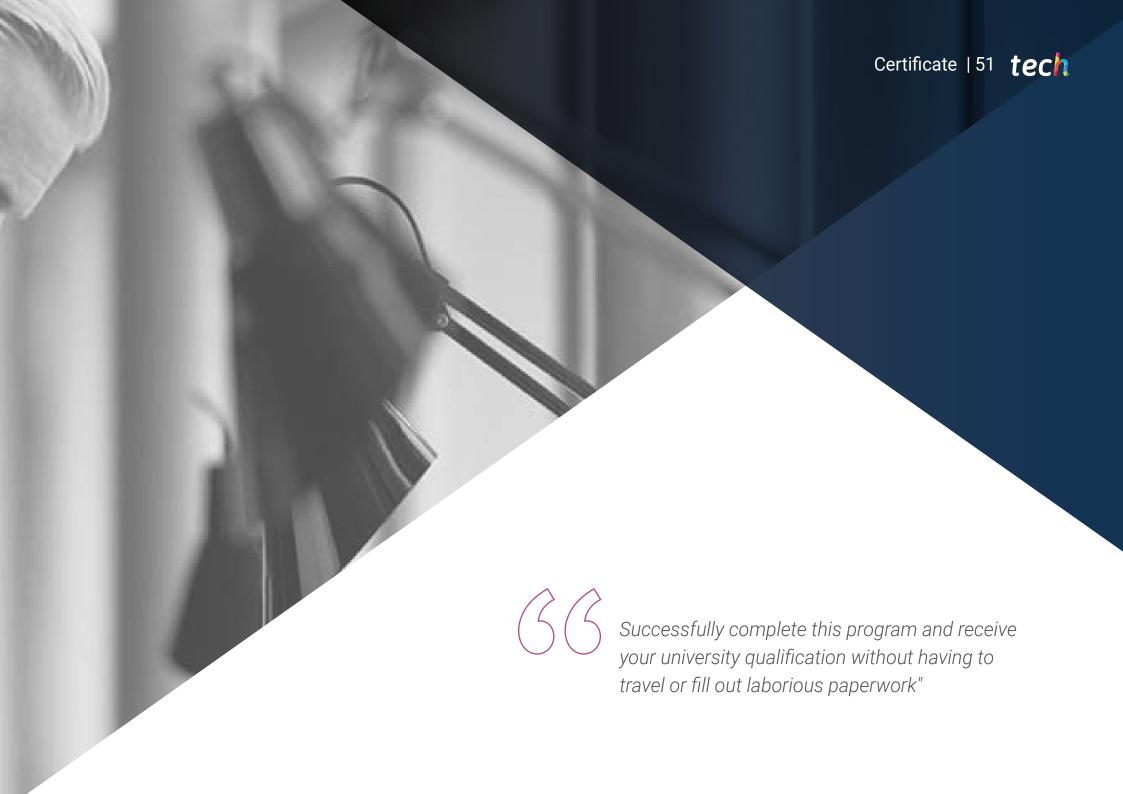
The manager can work on a current project or develop new projects in the field of R&D or Business Development within their company.



Increased competitiveness

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





tech 52 | Certificate

This **Postgraduate Diploma in Business Data Analysis** 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 Diploma** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Diploma in Business Data Analysis** Official N° of Hours: **450 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.



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