

# Postgraduate Certificate Introduction to Statistics





## Postgraduate Certificate Introduction to Statistics

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/information-technology/postgraduate-certificate/introduction-statistics](http://www.techtitute.com/information-technology/postgraduate-certificate/introduction-statistics)

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# 01

# Introduction

TECH offers the most complete opportunity to incorporate the professional management of statistics into your professional skills. In this program, TECH offers the possibility of training the student as a specialist in all aspects necessary for its use, with the exceptional quality of TECH, the largest university in the online teaching market.



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*Learn with us about the introductory concepts of statistics and its reasoning, through the highest quality teaching on the educational market"*

We live in a 'Data Society' where data provides us with the value to define the most appropriate strategy. Statistics is the basic science for learning from data. Analyze the data produced and draw conclusions using statistical tools to make the most appropriate decisions at all times.

In this module, students will learn the introductory concepts of statistics; statistical reasoning; representing relationships between different variables.

We will focus on the principles of probability that are the basis for inferential statistics, which will help students to contrast conjectures (hypothesis contrasts) on how a certain population is.

Finally, it will be shown how regression analysis is one of the most widely used techniques for the detection of patterns in large volumes of data.

This **Postgraduate Certificate in Introduction to Statistics** contains the most complete and up-to-date educational program on the market. The most important features of the training include:

- ◆ Practical case studies presented by experts
- ◆ 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 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 complete update that will provide you with the working capacity of a specialist in the field"*

“

*The most useful, practical and efficient learning systems in the international educational system, at your fingertips"*

The program's teaching staff includes professionals from sector who contribute their work experience to this training 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 training program designed to train in real situations.

The design of this program focuses on Problem-Based Learning, which means the student must try to solve the different real-life situations of that arise throughout the academic program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

*This training has the best teaching material available online or downloadable, to facilitate your study and effort management.*

*A very complete training, created with a strong focus on quality and bringing our students to the highest level of skill.*



# 02 Objectives

The objectives of this Postgraduate Certificate were established with a basis on realistic and necessary goals for a professional in the sector. Gradually, students will be able to verify their learning and progress in the mastery of the contents so that, at the end, they will have finished a complete process of professional growth



“

*Realistic, achievable and high-impact goals for your professional education”*



## General Objectives

- ◆ Analyze the data produced and draw conclusions from them using statistical tools.
- ◆ Learn the introductory concepts of statistics
- ◆ Knowledge of the principles of probability

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*A stimulating professional growth journey designed to keep you interested and motivated throughout the training”*





### Specific Objectives

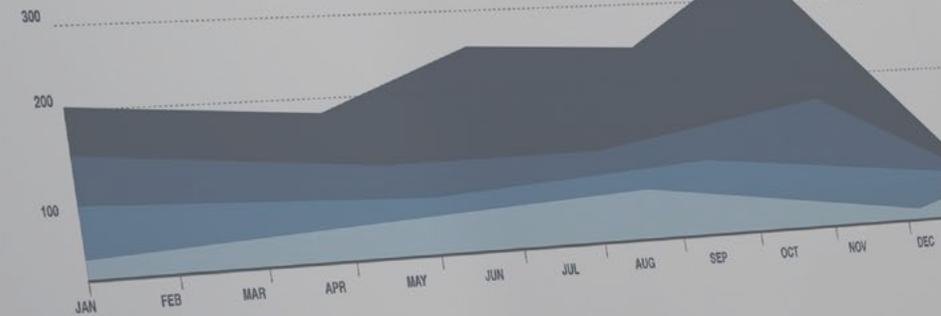
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- ◆ Know the different theories for data analysis and interpretation
- ◆ Identify the most common descriptors for a dataset
- ◆ Understand and evaluate the applicability of different descriptors to an existing dataset
- ◆ Learn about hypothesis testing and its applicability to the world of data analysis
- ◆ Learn how to interpret the different existing regression techniques

# 03

# Course Management

Within the quality criteria that we apply in all our programs, this program represents an opportunity to learn from the best, with a teaching staff made up of professionals in the sector who will invest their theoretical and practical knowledge to take you to the highest level of training With the latest and most effective teaching methods on the online teaching market.



Ready



“

*Learn with the best and acquire the knowledge and skills you need to intervene in this area of development with total success”*

## International Guest Director

Recognized as one of the best experts in Data Science by Forbes magazine, Robert Morgan is a distinguished mathematician highly specialized in the field of Computational Statistics. His extensive knowledge in this field has allowed him to be part of international reference institutions, such as the multinational Unilever.

In this way, he has led the Data Science strategy at a global level. In this sense, he has supervised multiple projects that use advanced analysis to optimize the strategic operations of companies. Among his major achievements, he has improved the shopping experience of multiple customers by offering them personalized product recommendations based on their preferences. As a result, it has enabled users to establish loyal relationships with brands. It has also employed Digital Twins in the manufacturing network, managing to monitor soap production in real time and significantly improving its quality.

Moreover, his philosophy focuses on the use of data systems to solve complex problems in the business environment and drive innovation. In the same vein, in his spare time he develops software and participates in open source projects. As such, he stays at the forefront of the latest trends in subjects such as Bayesian Statistics, Big Data or Artificial Intelligence, among others.

In addition, his work has been rewarded on multiple occasions in the form of awards. For example, he recently received the “Business Achievement” award from Unilever for his contribution to the digital transformation of the company. In this regard, it is worth noting that the integration of technologies has enabled companies to improve their operational efficiency by automating repetitive tasks. This has considerably reduced human errors in the logistics chain, resulting in both time and cost savings.



## Mr. Morgan, Robert

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- Global Director of Data Science at Unilever in New York, United States
- Head of Analytics and Data Science at Dunhumby, New York
- Statistician at Unilever, New York
- M.Sc. in Computational Statistics from Bath University
- M.Sc. in Statistical Research from Bristol University
- B.Sc. in Mathematics, Cardiff University
- Certificate in Statistical Learning from Stanford University
- Certificate in Programming from Johns Hopkins University

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

## Management



### Mr. Galindo, Luis Ángel

- ◆ Senior High Performance Consultant with 16 years of experience
- ◆ Definition, development and implementation of a successful open innovation model, with +10% year-on-year revenue growth leveraged on innovative assets
- ◆ Definition, development and implementation of successful Digital Transformation Programs for more than 8 years and 700+ people leading a pioneering role in the industry.
- ◆ Implementation of 20+ complex consulting projects worldwide for large companies in artificial intelligence, economic intelligence, cybersecurity, business development, digital transformation, risk assessment, process optimization and people management
- ◆ Expert in understanding customers and translating their needs into actual sales

## Professors

### Ms. Cordero García, Marta

- ◆ University Professor, Polytechnic School of Madrid
- ◆ Aerospace Engineering Department: Mathematics Applied to Aerospace Engineering

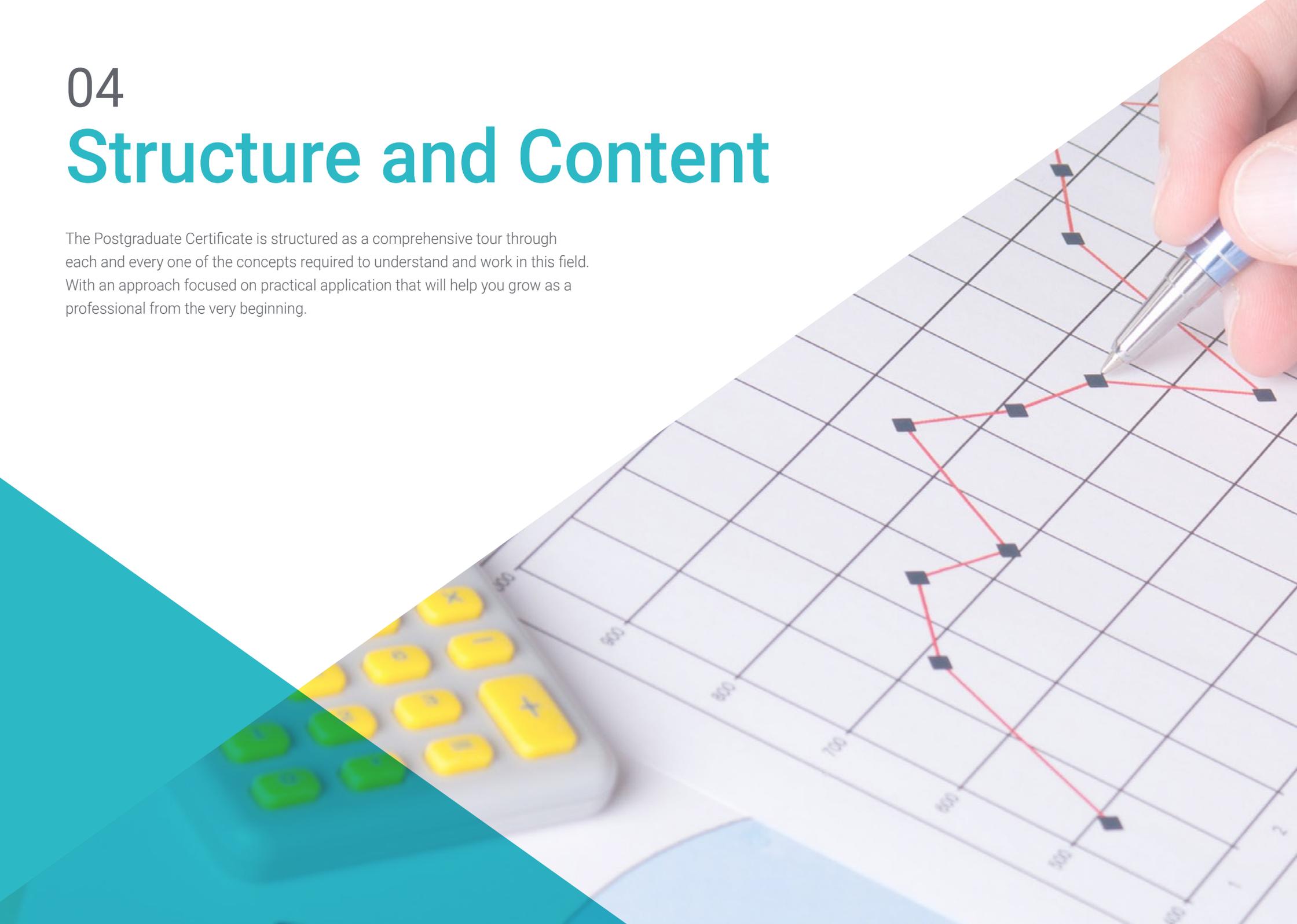
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*Update your knowledge  
through the University  
Course in Skin Microbiota”*

# 04

## Structure and Content

The Postgraduate Certificate is structured as a comprehensive tour through each and every one of the concepts required to understand and work in this field. With an approach focused on practical application that will help you grow as a professional from the very beginning.





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*A comprehensive syllabus focused on acquiring knowledge and converting it into real skills, created to propel you to excellence"*

## Module 1. Data Analysis and Interpretation

- 1.1. Introduction to Statistics
- 1.2. Measures Applicable to the Processing of Information
- 1.3. Statistical Correlation
- 1.4. Theory of Conditional Probability
- 1.5. Random Variable and Probability Distribution
- 1.6. Bayesian Inference
- 1.7. Sample Theory
- 1.8. Confidence Intervals
- 1.9. Hypothesis Testing
- 1.10. Regression Analysis





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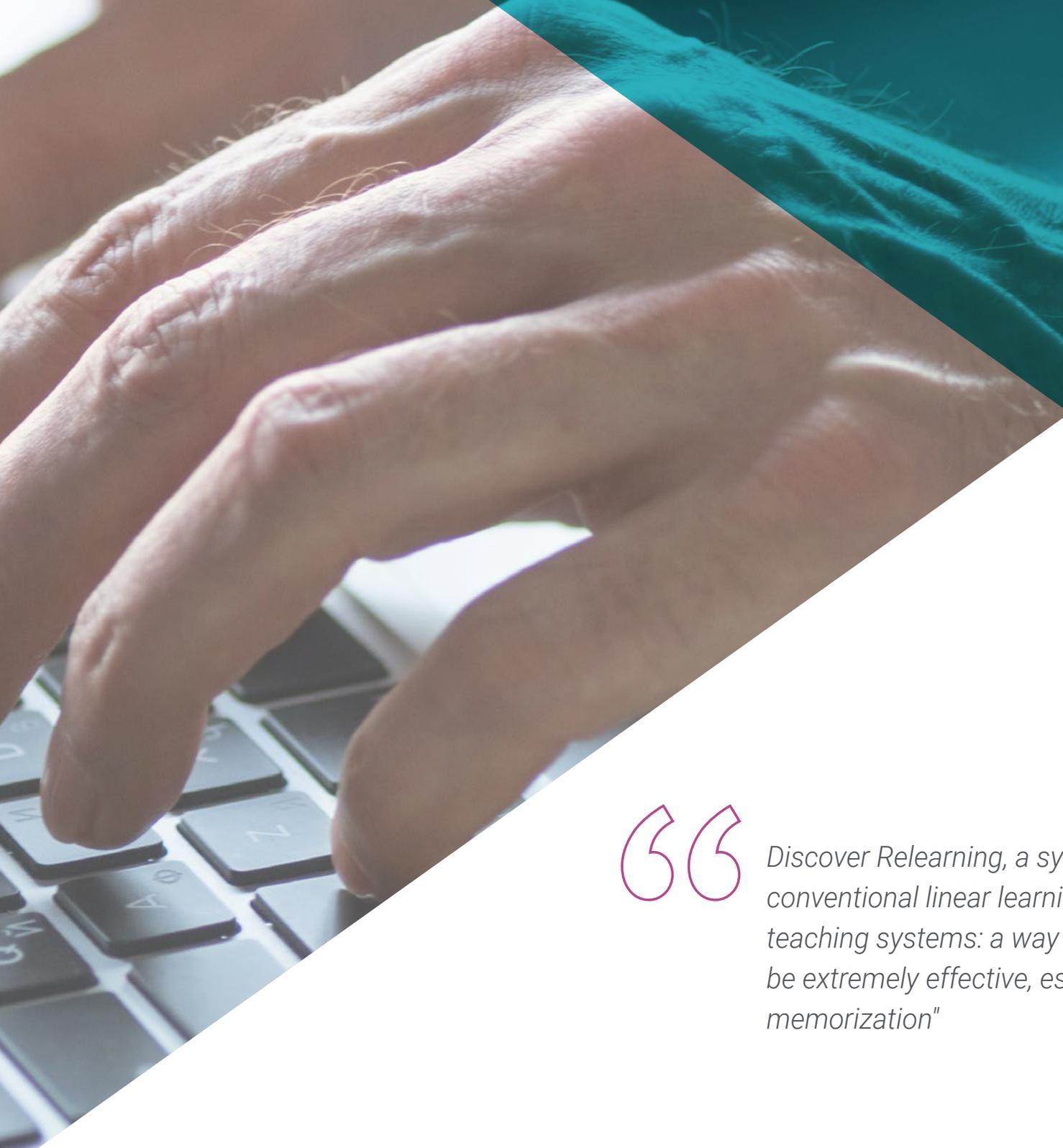
*This program is the key to advancing your career, don't miss this opportunity”*

# 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.



A close-up photograph of a person's hands typing on a laptop keyboard. The image is partially obscured by a teal diagonal graphic element that covers the top right and bottom right portions of the page.

“

*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.*



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

### 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.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

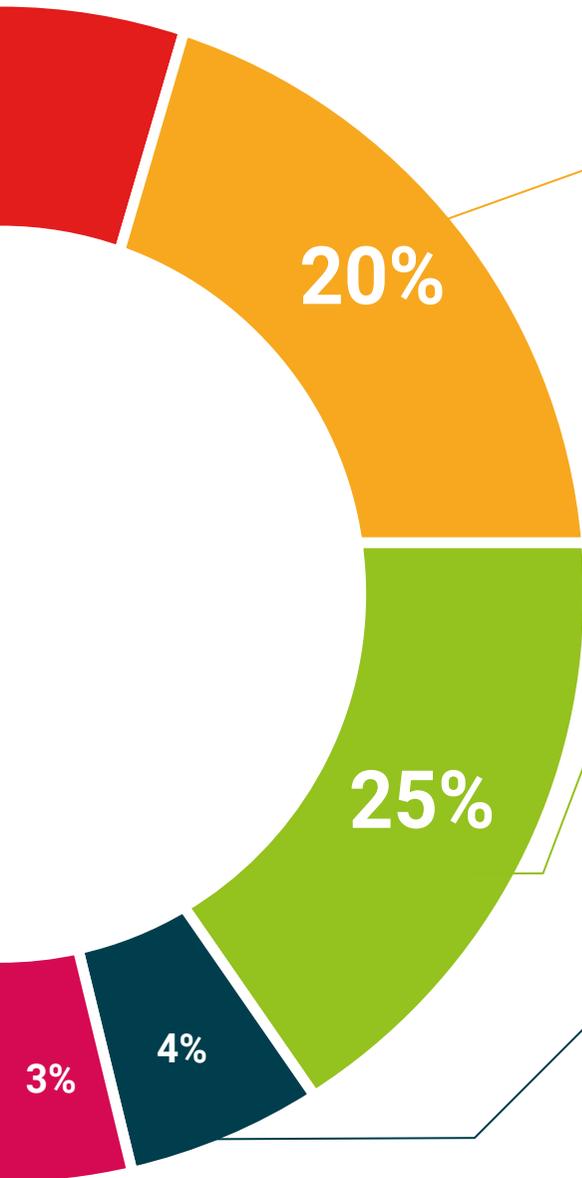
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

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



#### Interactive Summaries

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

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



#### Testing & Retesting

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



# 06 Certificate

The Postgraduate Certificate in Introduction to Statistics guarantees, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*Successfully complete this program and receive your university certificate without travel or laborious paperwork"*

This private qualification will allow you to obtain an **Postgraduate Certificate in Introduction to Statistics** 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.

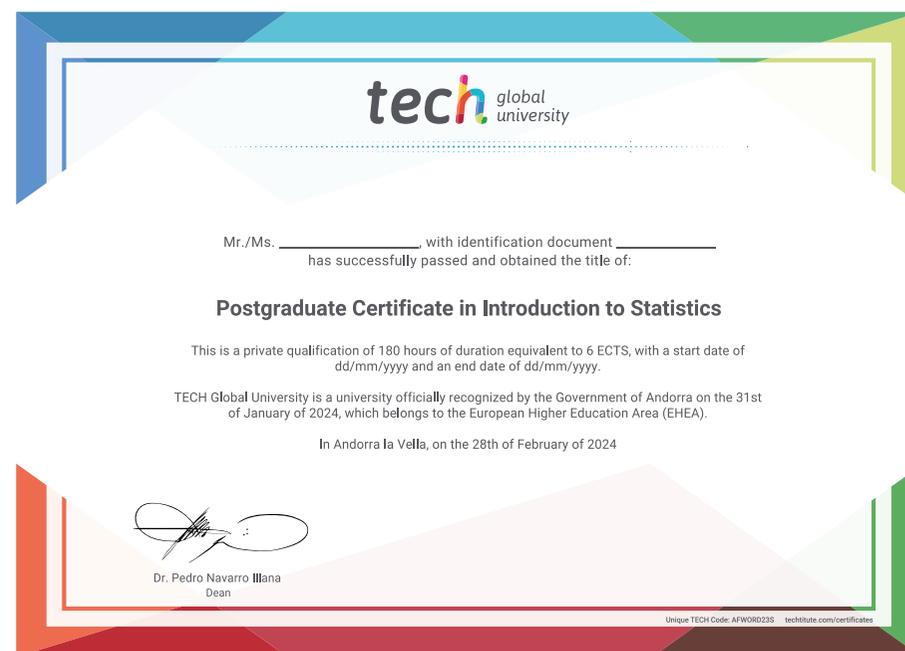
This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Introduction to Statistics**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom



## Postgraduate Certificate Introduction to Statistics

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

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