

# Postgraduate Certificate Econometrics





## Postgraduate Certificate Econometrics

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online
- » Target Group: University graduates and professionals in the field of Business Sciences who would like to further their studies in this area.

Website: [www.techtute.com/us/school-of-business/postgraduate-certificate/econometrics](http://www.techtute.com/us/school-of-business/postgraduate-certificate/econometrics)

# Index

01

Welcome

---

*p. 4*

02

Why Study at TECH?

---

*p. 6*

03

Why Our Program?

---

*p. 10*

04

Objectives

---

*p. 14*

05

Structure and Content

---

*p. 18*

06

Methodology

---

*p. 24*

07

Our Students' Profiles

---

*p. 32*

08

Impact on Your Career

---

*p. 36*

09

Benefits for Your Company

---

*p. 40*

10

Certificate

---

*p. 44*

# 01 Welcome

This TECH program will conduct a thorough analysis of the importance and functioning of Econometrics, which makes use of mathematical and statistical models to interpret and make estimates about economic systems, predicting variables such as the price of goods and services, interest rates, exchange rates, market reactions, business trends and the consequences of economic policy in the business environment. This knowledge will be the professional's main asset when it comes to entering a business sector that is increasingly demanding experts who can perform this type of econometric analysis.



Postgraduate Certificate in Econometrics  
TECH Global University



“

*An in-depth knowledge of how econometrics works will enable you to work successfully in companies in various sectors and will help you to position yourself as a professional of reference in the sector”*

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 center for intensive managerial skills education.



“

*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 balances 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.

**+100000**

executives prepared 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

---

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 (postgraduate learning methodology with the best international valuation) with the Case Study. Tradition and vanguard in a difficult balance, and in the context of the most demanding educational 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 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 analyses in academia"*

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 education of the highest academic level”*

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:

**01**

### A Strong Boost to Your Career

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 students achieve positive career development in less than 2 years.*

**02**

### Develop a strategic and global vision of the company

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

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

**03**

### 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.*

**04**

### You will 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 fields 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

### You will be part of an exclusive community

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

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

# 04 Objectives

The objectives of this program are based on meeting the educational needs of Business Science professionals in the field of Econometrics. In this sense, a complete and optimal program has been realistically established to lead students to academic excellence and encourage them to efficiently advance in their professional careers. For all these reasons, this training will be a journey of personal and professional growth for our students that will lead them to the highest quality in expert intervention in organizational economic.



“

*International experience, ethical commitment, and business acumen are some of the most sought-after characteristics in executives in the digital age”*

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

The **Postgraduate Certificate in Econometrics** enable the students to:

01

Have a global vision of economics at a global scale

02

Understand the fundamentals of Econometrics

03

Analyze economic theories by means of estimation methods, calculations or by interval and hypothesis testing, both parametric and non-parametric







04

Conduct economic policy assessments of a country's government

05

Analyze the effect that a social policy

06

Generate predictions about a country's economy

05

# Structure and Content

The syllabus for this Postgraduate Certificate has been designed and created by a team of experts in the field to respond specifically to the needs of Business Science professionals. This compendium of content has also been conceived with a focus on applied learning that will allow professionals to successfully intervene by means of a broader vision of real environments in the profession. Therefore, this syllabus will become the student's main asset when it comes to successfully entering a labor market that increasingly demands more and more professionals specialized in Econometrics.



“

*The most complete syllabus on the market with a single purpose: to create the best managers in business”*

## Syllabus

Econometrics is that part of economics that, through economic and statistical models, studies and interprets economic systems, making estimates on aspects such as the prices of goods and services, exchange rates, the cost of production and/or interest rates, among others, in order to understand the trends that govern business and the consequences that national and international economic policy has on companies.

This part of economics is very important because it makes it easier for managers to make assertive decisions, through predictions that help to understand what is the best course to take. Being fully aware of this, TECH professionals have designed this very complete Postgraduate Certificate in Econometrics that was created with the aim of training business professionals to be able to perform this deep analysis, obtaining data that help to understand where the organization is heading and the changes or steps to follow to achieve optimal growth.

If you want to improve yourself, achieve a positive change at a professional level, interact with the best through an interesting online universe and belong to the new generation of professionals, able to develop their work anywhere in the world, this may be your path.

Therefore, throughout this training, the student analyzes a multitude of practical cases through individual and team work that will allow them to understand in depth the functioning of econometrics in organizations. This complete immersion in real-life situations will give you a more complete and effective view of the current global business landscape, and will help you understand how the global economy behaves and make you a much more competent professional.

This Postgraduate Certificate takes place over 6 weeks and is taught entirely online.

### Module 1

### Econometrics



### Where, When and How is it Taught?

You can do it completely online, wherever and whenever you want and in a connected way, attending our workshops and virtual conferences.

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

**Module 1. Econometrics**

**1.1. The Ordinary Least Squares (OLS) Method**

- 1.1.1. Linear Regression Models
- 1.1.2. Types of Content
- 1.1.3. General Line and OLS Estimation

**1.2. OLS Method in Other Scenarios**

- 1.2.1. Abandoning Basic Assumptions
- 1.2.2. Method Behavior
- 1.2.3. Effect of Measurement Changes

**1.3. Properties of OLS Estimators**

- 1.3.1. Moments and Properties
- 1.3.2. Variance Estimation
- 1.3.3. Matrix Forms

**1.4. OLS Variance Calculation**

- 1.4.1. Basic Concepts
- 1.4.2. Hypothesis Testing
- 1.4.3. Model Coefficients

**1.5. Hypothesis Testing in Linear Regression Models**

- 1.5.1. T-Contrast
- 1.5.2. F-Contrast
- 1.5.3. Global Contrasts

**1.6. Confidence Intervals**

- 1.6.1. Objectives
- 1.6.2. In a Coefficient
- 1.6.3. In a Combination of Coefficients

**1.7. Specification Problems**

- 1.7.1. Use and Concept
- 1.7.2. Types of Problems
- 1.7.3. Unobservable Explanatory Variables

**1.8. Prediction in Linear Regression Models**

- 1.8.1. Prediction
- 1.8.2. Average Value Intervals
- 1.8.3. Applications

**1.9. Residual Analysis in Linear Prediction**

- 1.9.1. Objectives and General Concepts
- 1.9.2. Analysis Tools
- 1.9.3. Waste Analysis

**1.10. Qualitative Variables in GLRM I**

- 1.10.1. Fundamentals
- 1.10.2. Models with Various Types of Information
- 1.10.3. Linear Metrics

**1.11. Qualitative Variables in GLRM II**

- 1.11.1. Binary Variables
- 1.11.2. Use of Dummy Variables
- 1.11.3. Time Series

**1.12. Autocorrelation**

- 1.12.1. Basic Concepts
- 1.12.2. Consequences
- 1.12.3. Contrast

**1.13. Heteroscedasticity**

- 1.13.1. Concept and Contrasts
- 1.13.2. Consequences
- 1.13.3. Time Series



*A unique, key, and decisive educational experience to boost your professional development and make the definitive leap towards a better professional future”*



# 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”*

*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 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.

## 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.

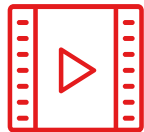
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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.



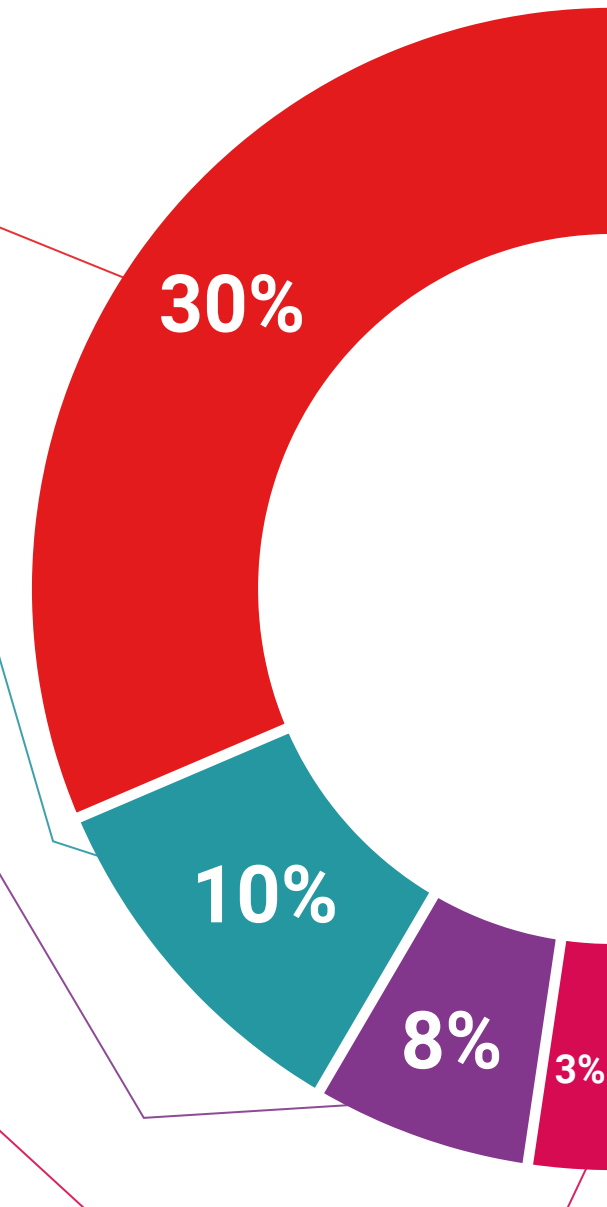
### Management Skills Exercises

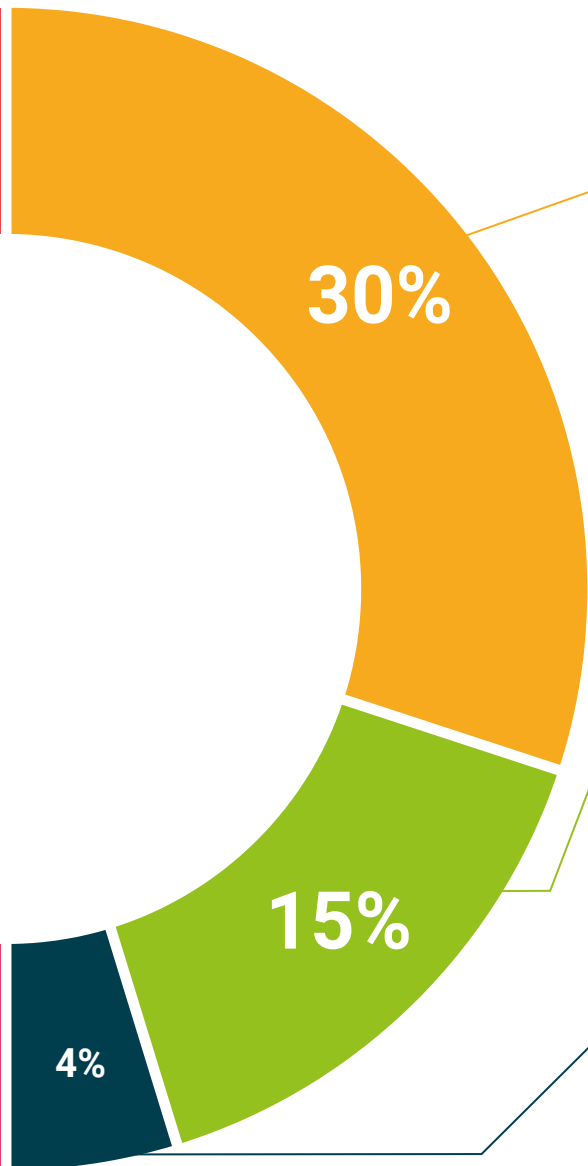
They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



### 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 Econometrics is a program aimed at business professionals who want to update their knowledge in the area of data the business level, and advance their professional career towards a promising future in the field. The compendium of knowledge they will acquire after completing this comprehensive program will enable them to practice in the field with guarantees of success and to position themselves as experts in digital entrepreneurship.







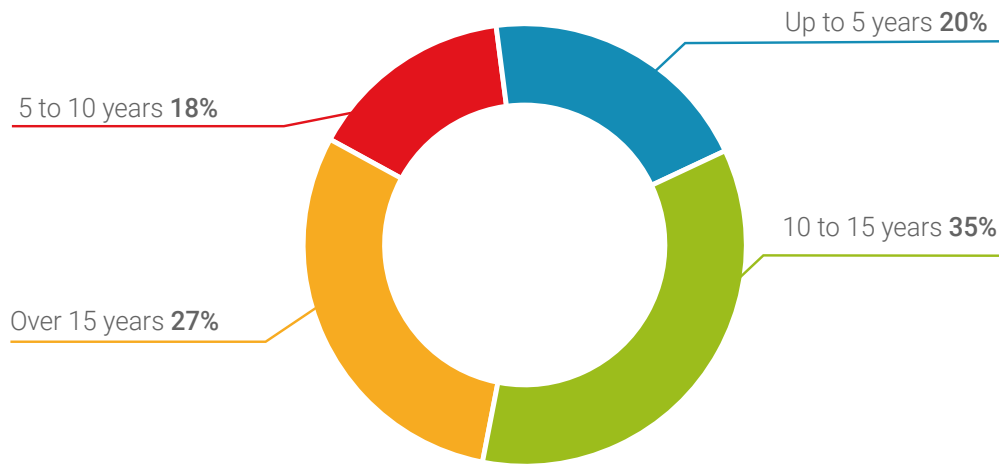
“

*If you want to achieve an interesting improvement in your professional career while continuing to work, this is the program for you"*

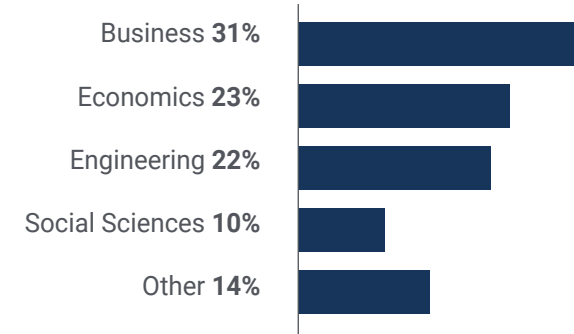
### Average Age

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

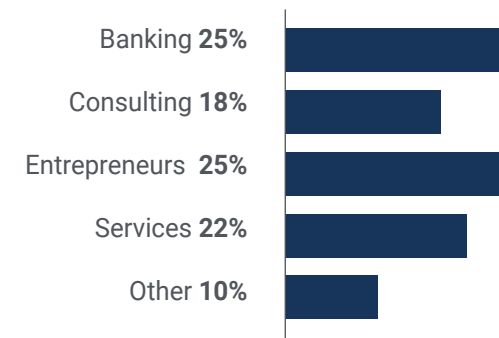
### Years of Experience



### Training

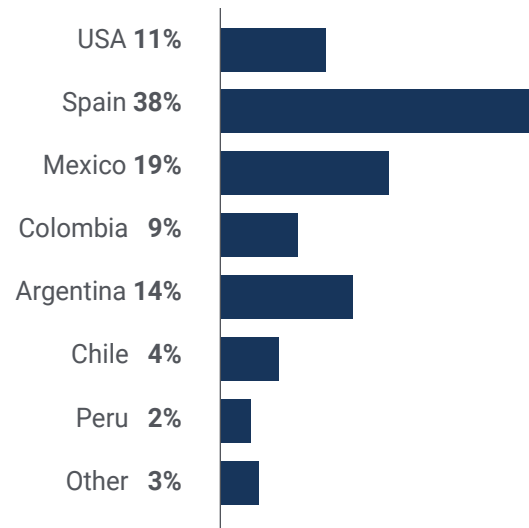


### Educational Profile



## Geographical Distribution

---



## Sandra Acosta

---

Administrator

*"I have been sincerely surprised with the quality of this information and above all very pleased with the study methodology. Econometrics has always been difficult for me, but with this Postgraduate Certificate I have understood it in a much simpler way. Thanks TECH"*

08

# Impact on Your Career

We are aware that studying a program like this entails great economic, professional and, of course, personal investment. The ultimate goal of this great effort should be to achieve professional growth. That is why TECH offers you all the tools you need to achieve the professional change you wish. A professional improvement that you will achieve with effort and hours of study.





“

*Our main challenge is to generate a positive change in your career path”*

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

With this programme you will be able to drastically advance in your profession, although there is no doubt that, in order to do so, you will have to make an investment in different areas, such as economic, professional and personal.

However, the goal is to improve in your professional life and, to do so, it is necessary to fight.

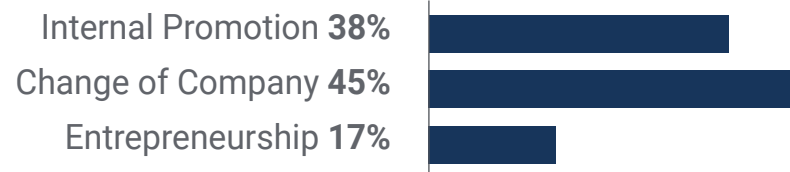
*Thanks to this programme you will receive a large number of job offers with which you will be able to start your professional growth.*

*TECH will help you boost your career in no time.*

### Time of Change



### Type of Change



## Salary Increase

---

This program represents a salary increase of more than **25.22%** for our students.



09

# Benefits for Your Company

Postgraduate Certificate in Econometrics contributes to elevate the organization's talent to its maximum potential through the specialization of high-level leaders.

Participating in this program is a unique opportunity to access a powerful network of contacts in which to find future professional partners, customers or suppliers.







“

*You will be able to contribute new concepts, strategies and perspectives to the company that can bring about essential changes in the organization”*

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

01

### **Growth of talent and intellectual capital**

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**

You will be able to make decisions in times of uncertainty and crisis, helping the organization 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 R & D or business development of your company.

---

06

### **Increased competitiveness**

This program will equip students with the skills to take on new challenges and drive the organization forward.

# 10 Certificate

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



“

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

This private qualification will allow you to obtain a **Postgraduate Certificate in Econometrics** 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.

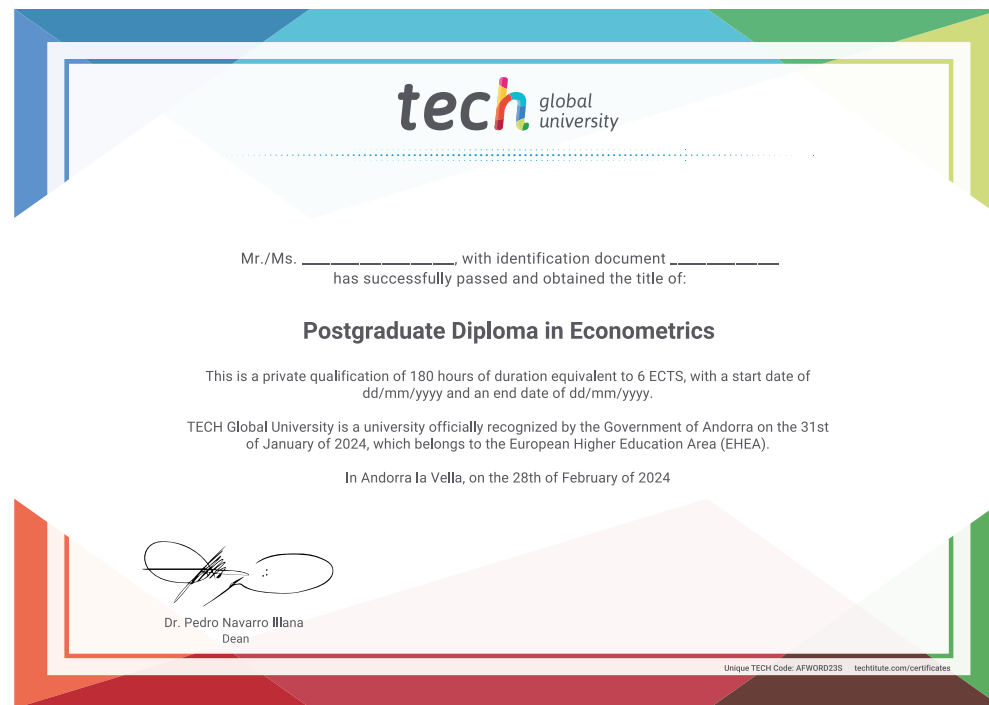
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Econometrics**

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.



## Postgraduate Certificate Econometrics

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

# Postgraduate Certificate Econometrics