

# Postgraduate Certificate Statistics in Economics



## Postgraduate Certificate Statistics in Economics

- » Modality: online
- » Duration: 12 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/pk/engineering/postgraduate-certificate/statistics-economics](http://www.techtitute.com/pk/engineering/postgraduate-certificate/statistics-economics)

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# 01

# Introduction

Statistics is a key tool in the field of economics and is essential for engineers to make informed decisions in this area. Studying it allows them to understand and analyze economic data, identify patterns and trends in markets, and make evidence-based decisions. For this reason, TECH has designed a program that allows students to maximize their knowledge of aspects such as Statistical Systems and Economic Indicators, Operations with Indexes or Series Valuation, among others. All this, thanks to a 100% online format and with the most dynamic and practical multimedia materials in the academic market.





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*Gain in-depth knowledge of Macroeconomics and its Evolution, thanks to the most complete and practical content on the market”*

Economics relies heavily on data collection and analysis. Engineers who study economics can use statistical techniques to collect and analyze economic and financial data, such as inflation, economic growth and interest rates. These data are essential for making informed economic decisions and understanding market behavior.

For this reason, TECH has designed a Postgraduate Certificate in Statistics in Economics to provide students with the necessary skills and competencies to be able to work as specialists with the highest possible efficiency and quality. Therefore, throughout this program, aspects such as Perfect Competition, the Invisible Hand, Chained Indexes or Variation Rates will be addressed.

All this, through a convenient 100% online format that allows students to organize their schedules and studies, combining them with their other day-to-day work and interests. In addition, this program has the most complete theoretical and practical materials on the market, which facilitates the student's study process and allows them to achieve their objectives quickly and efficiently.

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

- ♦ The development of case studies presented by experts in Statistics in Economics
- ♦ The graphic, schematic and eminently practical contents with which it is conceived provide sporting and practical information on those disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out 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



*Achieve your maximum potential  
as an expert in Statistics in  
Economics, in just 12 weeks and  
with total freedom of organization"*

“

*Address Weighted Composite Indexes or Income as a Measurement Element, at any time of the day and with total freedom of organization”*

*Enhance your professional profile in one of the most promising areas in the field of Engineering, thanks to TECH and the most innovative materials.*

*Access all the content on Perfect Competition and National Accounting, from your Tablet, cell phone or computer.*

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

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

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



# 02 Objectives

The final objective of this Postgraduate Certificate in Statistics in Economics is for the student to acquire new skills and competencies in this area. A complete up-to-date program that will allow the student to work with the necessary skills to face any challenge in this field. All this, thanks to TECH and a 100% online format that gives total freedom of organization and schedules to the student.





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*Delve into all the essential aspects of Macroeconomics and Demand Elasticities, without leaving your home and without the need to travel”*



## General Objectives

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- ♦ Apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the development and defense of arguments and problem solving within their area of study
- ♦ Perform basic operations related to information debugging
- ♦ Use the appropriate sources of information for each type of applied study
- ♦ Describe the main sources of aggregate output growth of an economy in the long run
- ♦ Calculate and use elasticities and cost-of-living indexes



*Exceed your highest expectations,  
thanks to a unique program with the  
most complete theoretical and practical  
materials on the academic market"*





## Specific Objectives

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- ◆ Study, understand and apply specific methods for the study of the time evolution of a magnitude, such as variation indexes and classical time series analysis
- ◆ Describe and analyze the elements on which both the consumer's and the producer's choice depends
- ◆ Calculate the market equilibrium of a good and its changes in response to shifts in the supply and demand curves
- ◆ Describe the agents and characteristics of a perfectly competitive market, and calculate the equilibrium
- ◆ List the characteristics of the financial system and the agents and institutions that form it
- ◆ Explain the concept of macroeconomic equilibrium and its properties using the aggregate supply and demand model

03

# Structure and Content

The structure and contents of this syllabus have been designed by the renowned professionals that are part of TECH's team of experts in this area of Engineering. These specialists have used their extensive experience and their most advanced knowledge to create practical and completely up-to-date contents. All this, based on the most efficient teaching methodology, TECH's Relearning.





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*Expand your knowledge of Statistics in Economics, thanks to the most innovative teaching materials and a wide variety of additional content available on the Virtual Campus”*

## Module 1. Economic Statistics

- 1.1. Introduction
  - 1.1.1. Definition and Variations Indexes
  - 1.1.2. Usefulness of Variation Indexes
- 1.2. Classification of Indexes
  - 1.2.1. Simple Indexes
  - 1.2.2. Composite Indexes
- 1.3. Simple Indexes
  - 1.3.1. Rates of Change
- 1.4. Unweighted Composite Indexes
  - 1.4.1. Definition
  - 1.4.2. Properties
- 1.5. Weighted Composite Indexes
  - 1.5.1. Laspeyres Indexes
  - 1.5.2. Paasche Indexes
  - 1.5.3. Edgeworth Indexes
  - 1.5.4. Fisher Indexes
- 1.6. Value Indexes
  - 1.6.1. Definition
  - 1.6.2. Properties
- 1.7. Index Properties
  - 1.7.1. Main Properties
  - 1.7.2. Applications
- 1.8. Operations with Indexes
  - 1.8.1. Renovation
  - 1.8.2. Liaison
  - 1.8.3. Change of Base
- 1.9. Chained Indexes
  - 1.9.1. The Chained Laspeyres Volume Index
- 1.10. Series Valuation
  - 1.10.1. Deflation of Economic Series

## Module 2. Statistical System and Economic Indicators

- 2.1. Introduction
  - 2.1.1. Economics Field
  - 2.1.2. Three Principles of Economics: Optimality, Equilibrium and Empiricism
  - 2.1.3. Economic Methods and Issues
- 2.2. Demand, Supply and Equilibrium
  - 2.2.1. The Markets
  - 2.2.2. How do Buyers Behave?
  - 2.2.3. How do Sellers Behave?
  - 2.2.4. Supply and Demand in Equilibrium
- 2.3. Consumers, Sellers and Incentives
  - 2.3.1. The Buyer's Problem
  - 2.3.2. From the Buyer's Problem to the Demand Curve
  - 2.3.3. Demand Elasticities and Cost of Living Indexes
  - 2.3.4. Consumer Surplus
  - 2.3.5. The Seller's Problem
  - 2.3.6. From the Seller's Problem (In a Competitive Market) to the Supply Curve
  - 2.3.7. The Producer's Surplus
- 2.4. Perfect Competition and the Invisible Hand
  - 2.4.1. Perfect Competition and Efficiency
  - 2.4.2. Prices Drive the Invisible Hand
  - 2.4.3. Equity and Efficiency
- 2.5. Macroeconomics and its Evolution
  - 2.5.1. Real and Nominal GDP, Price Indexes
  - 2.5.2. Macroeconomic Issues
  - 2.5.3. What GDP Does Not Measure
  - 2.5.4. National Accounts: GDP, its Measurement and its Limits
- 2.6. Analysis of Differences in the Standard of Living between Countries
  - 2.6.1. Income as a Measurement Element
  - 2.6.2. The Aggregate Production Function and Productivity
  - 2.6.3. Technology



- 2.7. Economic Growth
  - 2.7.1. The Importance of Economic Growth
  - 2.7.2. Sources of Economic Growth
  - 2.7.3. Introduction to Growth Accounting
  - 2.7.4. Growth, Inequality and Poverty
- 2.8. Short-Term Economic Analysis
  - 2.8.1. Business Cycles
  - 2.8.2. Macroeconomic Equilibrium and Cycles
  - 2.8.3. Multipliers and Short- and Medium-Term Equilibrium
- 2.9. Stabilizing Policies
  - 2.9.1. Monetary Policy
  - 2.9.2. Fiscal Policy
- 2.10. Macroeconomics and International Trade
  - 2.10.1. The Advantages of International Trade
  - 2.10.2. Accounting for International Trade
  - 2.10.3. International Trade and Economic Growth



*Learn the keys to paving and materials for airport concourses with this fully online Postgraduate Certificate*



# 04 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.







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*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.

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*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 is the most widely used learning system in the best faculties in the world. 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 program, the studies 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 8 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.



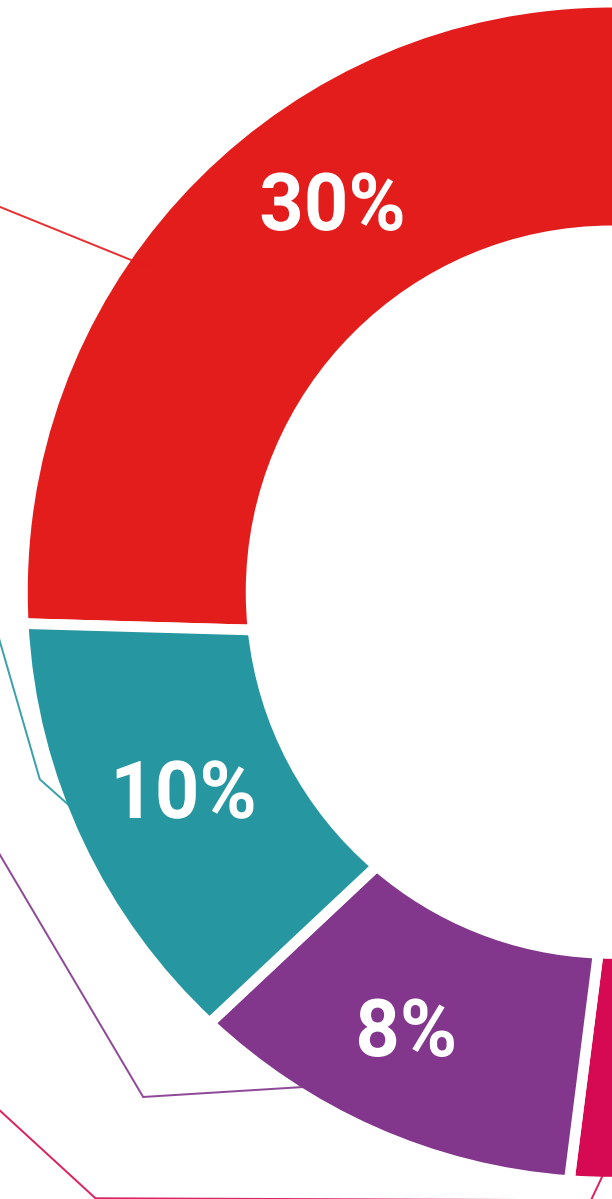
#### Practising Skills and Abilities

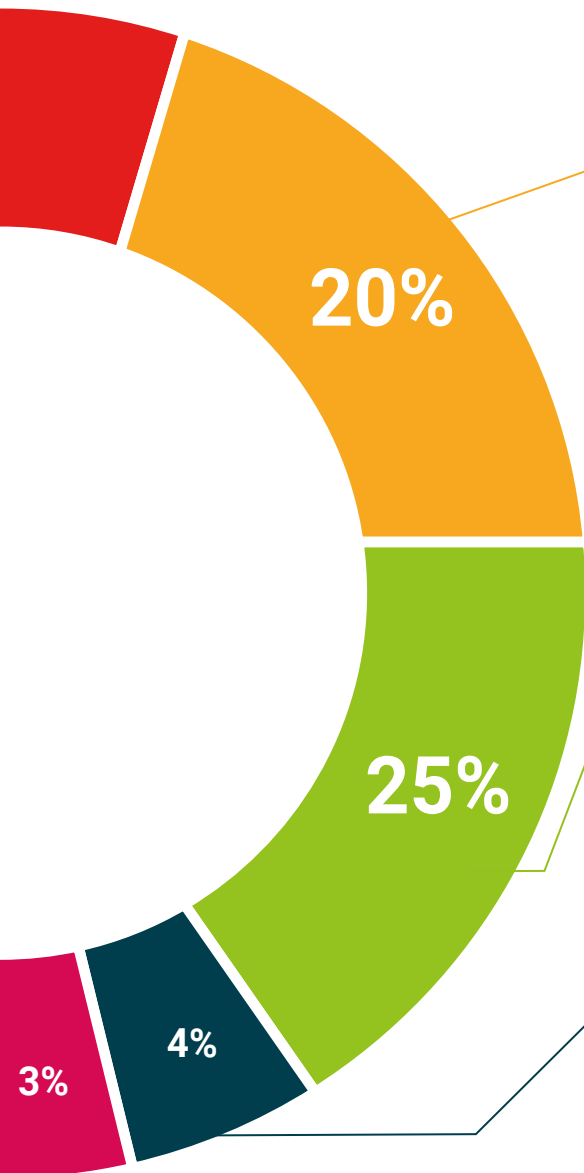
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### Additional Reading

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



**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.





# 05 Certificate

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





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

This **Postgraduate Certificate in Statistics in Economics** contains the most complete and up-to-date program on the market.

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

The 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 Statistics in Economics**

Official N° of Hours: **300 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 quality  
online training  
development language  
virtual classroom

**tech** technological university

**Postgraduate Certificate**  
**Statistics in Economics**

- » Modality: online
- » Duration: 12 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
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- » Exams: online

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