



Predictive Statistics

for Business and Risk Management

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

» Target Group: University Graduates who have previously completed any of the degrees in the fields of Social and Legal Sciences, Administrative and Business Sciences.

Website: www.techtitute.com/pk/school-of-business/postgraduate-diploma/postgraduate-diploma-predictive-statistics-business-risk-management

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01 **Welcome**

Economics focused on asset performance management provides emerging opportunities in the current market and the future impact of key drivers and challenges, also guiding specialists to make profitable and effective business decisions. In fact, attending to knowledge in risk management will boost the organization in such a way that, in the future, it will be able to face any unexpected crisis situation. For this reason, TECH offers a complete and rigorous program to expand and update the knowledge of graduates in Economics and other financial fields. TECH applies a 100% online modality that makes possible the complete adaptation of the study to the personal and professional needs of the specialists.









tech 08 | Why Study at TECH?

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

+200

executives prepared 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.



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.



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.



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.



At TECH, you will have access to the most rigorous and up-to-date case analyses in academia"



Academic Excellence

TECH offers students the best online learning methodology. The university combines the *Relearning* methodology (the most internationally recognized postgraduate learning methodology) with Harvard Business School case studies. A complex balance of traditional and state-of-the-art methods, within the most demanding academic framework.





tech 12 | Why Our Program?

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



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.



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.



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.



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.



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 fields 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.



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.





tech 16 | Objectives

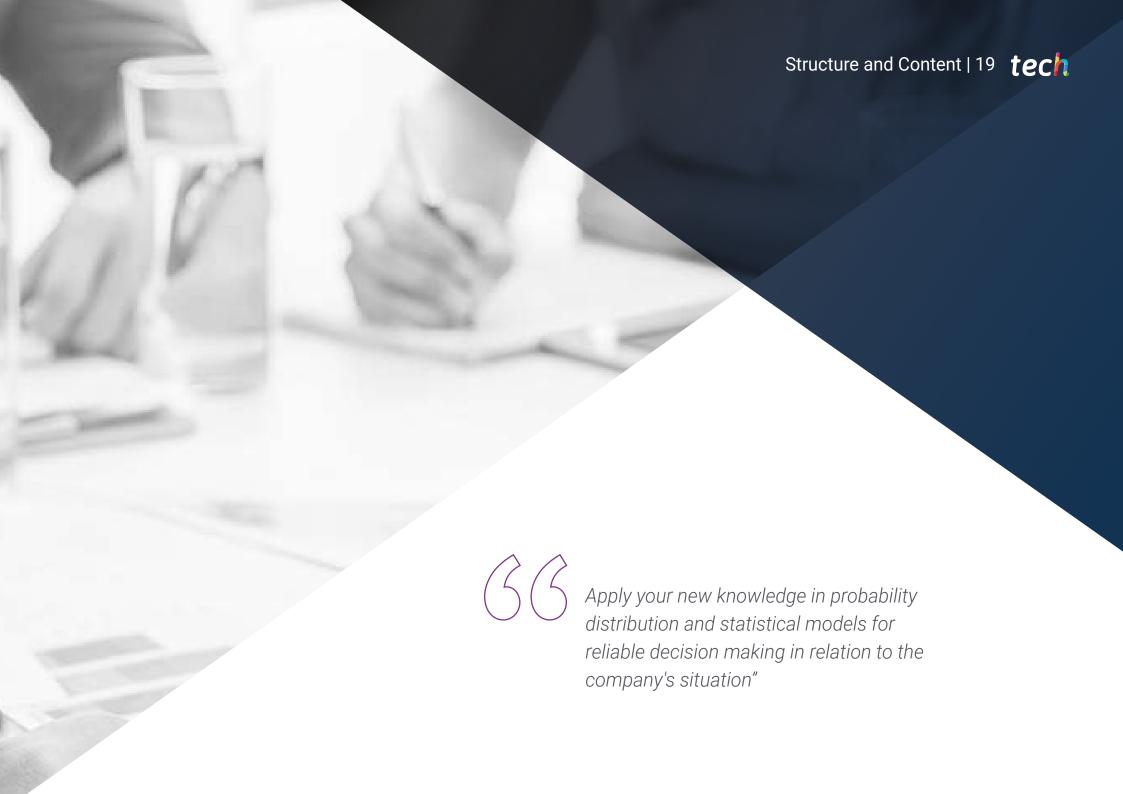
TECH makes the goals of their students their own goals too. Working together to achieve them.

The Postgraduate Diploma in Predictive Statistics for Business and Risk Management will enable the student to:









tech 20 | Structure and Content

Syllabus

The TECH Postgraduate Diploma in Predictive Statistics for Business and Risk Management is a complete and rigorous program designed to expand the financial skills of graduates in Economics through the study of estimation methods, calculations or by intervals and contrasts of both parametric and non-parametric hypotheses, among other aspects. One of the objectives of the program is to understand the functioning of future investments and to know how to manage investment results according to the company's policies and the country's economy. In this way, students will obtain a complete domain of the subject.

In order to achieve this, TECH provides this subject through theoretical and practical exercises and has audiovisual content in different formats and downloadable, which offer the possibility of consulting them at any time and place, even without an Internet connection. In this way, students will be able to apply the contents in the real financial scenario.

In addition, the University has adopted the most innovative methodology to facilitate and guarantee the financial training of students in the shortest possible time and in the most accessible way. In just six months, the student will delve into the basic concepts that make up financial operations, to develop, at the same time, models such as valuation of constant, variable or fractional income, to use them within the framework of the financial company, among other issues.

This is a program that will project the professional career of the Economist, supported by an expert teaching team in the area. In addition, TECH has a Relearning methodology so that specialists do not have to invest long hours of study.

This Postgraduate Diploma takes place over six months and is divided into four modules:

Module 1	Statistics I
Module 2	Statistics II
Module 3	Financial Transactions
Module 4	Econometrics



Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Diploma in Predictive Statistics for Business and Risk Management completely online. Throughout the 6 months of the educational program, 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 22| Structure and Content

Mod	Module 1. Statistics I					
1.1. 1.1.1. 1.1.2. 1.1.3.	Introduction to Statistics Basic Concepts Types of Variables Statistical Information	 1.2. Data Record Sorting and Classifying 1.2.1. Description of Variables 1.2.2. Frequency Distribution Table 1.2.3. Quantitative and Qualitative Frequency Distribution Tables 	1.3.1. 1.3.2.		1.4. 1.4.1. 1.4.2. 1.4.3. 1.4.4.	Descriptive Statistics Centralization Measurements
1.5. 1.5.1. 1.5.2. 1.5.3.	Box Plots Identifying Outliers	 1.6. Statistical Analysis of the RelationshAip between the Two Variables 1.6.1. Tabulation 1.6.2. Contingency Tables and Graphical Representations 1.6.3. Linear Relationship between Quantitative Variables 	1.7. 1.7.1. 1.7.2. 1.7.3. 1.7.4.	Time Series and Index Numbers Time Series Rates of Change Index Numbers Consumer Prices Index (CPI) and Deflated Time Series		Introduction to Probability: Calculation and Basic Concepts Basic Concepts Set Theory Probability Calculation
1.9. 1.9.1. 1.9.2. 1.9.3.	Random Variables and Probability Distributions Random Variables Variable Measurements Function of Probability	1.10. Probability Models for Random Variables 1.10.1. Probability Calculation 1.10.2. Discrete Random Variables 1.10.3. Continuous Random Variables 1.10.4. Models Derived from Normal Distribution				

Module 2. Statistics II			
 2.1. Probability: Random Variables 2.1.1. Random Experiments 2.1.2. Axioms of Probability 2.1.3. Elementary Properties 	 2.2. Probability Models 2.2.1. Random Variables 2.2.2. Bernoulli's Distribution 2.2.3. Binomial Distribution 2.2.4. Multinomial Distribution 	 2.3. Calculating Probabilities and Critical Points with R 2.3.1. Normal or Gaussian Distribution 2.3.2. R Commander 2.3.3. Properties 	 2.4. Statistical Inference: Some Preliminary Concepts 2.4.1. Definition and Preliminary Concepts 2.4.2. Binomial Distribution and Calculation 2.4.3. Normal Curve and Calculation
 2.5. Point Estimators: Sampling Distributions and Properties 2.5.1. General Concepts of Sampling Distribution 2.5.2. Point Estimation 2.5.3. Interval Estimation 	 2.6. Confidence Intervals (CI): Mean, Proportion, Variance. CI in Two Populations 2.6.1. Intervals for One or Several Samples 2.6.2. Bootstrap Method 2.6.3. Bayesian Intervals 	 2.7. Hypothesis Testing in Statistical Inference Methods 2.7.1. Statistical Hypothesis Testing 2.7.2. Region of Rejection and Acceptance 2.7.3. Decision Rules 	 2.8. Particular Cases: Population Mean, Variance and Proportion. Parametric Contrasts 2.8.1. Known and Unknown Variances 2.8.2. Likelihood Ratio 2.8.3. Equality Test
2.9. Chi-Squared Goodness-of-Fit Test2.9.1. Data Grouping2.9.2. Critical Region2.9.3. Expected Frequency	2.10. Normality Assumption Test: Jarque-Bera Test 2.10.1. Significant Variables 2.10.2. Central Limit Theorem 2.10.3. Estimators, Histogram	 2.11. Hypothesis of Independence with Two Qualitative Variables 2.11.1. Concept of Independent Variables 2.11.2. Observed and Expected Frequencies 2.11.3. Calculating the Contrast Ratio 	 2.12. Simple Linear Regression Models and Point Estimation 2.12.1. Regression and Linear Correlation Coefficient 2.12.2. Parameter Inference 2.12.3. Model Assumptions
2.13. Confidence Interval and Regression Lines 2.13.1. Linear Functions and Regression 2.13.2. Simple Linear Regression 2.13.3. Exogenous and Endogenous Variables	 2.14. Predictions and Applications of Information and Communication Technology 2.14.1. Theoretical and Conceptual Framework 2.14.2. Collection and Analysis Techniques 2.14.3. General and Specific Objectives 	2.15. Multiple Regression Models and Point Estimation 2.15.1. Hypothesis and Estimation 2.15.2. Types of Error and Model Adjustments 2.15.3. Linear Model Extensions	2.16. Global Significance Test of Regression 2.16.1. ANOVA Table 2.16.2. Multicollinearity

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Module 3. Financial Transactions		
3.1. Basic Concepts 3.1.1. Essential Terms for Financial Transactions 3.1.1.1. Financial Capital 3.1.1.2. Financial Law 3.1.1.3. Financial Operation 3.1.1.4. Commercial Characteristics: Effective Amounts and APR	 3.2. Simple Laws 3.2.1. Capitalization, Simple Discounting, Equivalent Quantities and Capital Substitution 3.2.2. Simple Capitalization in Arrears 3.2.3. Simple Discounting in Arrears 3.2.4. Simple Discounting in Advance 3.2.5. Equivalent Amounts 3.2.6. Capital Substitution: Common Maturity and Average Maturity 3.3. Short-Term Operations 3.3.1. Discounts on Trade Bills of Exchange: For Fait and Re-Draft 3.3.1. For-Fait 3.3.2. Re-Draft 3.3.2. Debit and Credit Current Account 3.3.2.1. Current Debit Account 3.3.2.1. Current Credit Account 3.3.3. Treasury Bill Transactions 3.3.3. Treasury Bill Transactions 3.3.1. Concept 3.3.2. Operation 	3.4. Compound Laws 3.4.1. Capitalization and Compound Discounts 3.4.1.1. Capitalization 3.4.1.1.1. Concept 3.4.1.1.2. Operation 3.4.1.2. Compound Discounts 3.4.1.2.1. Concept 3.4.1.2.2. Operation
 3.5. Income Valuation. Steady Income 3.5.1. Types of Steady Income 3.5.1. Concept 3.5.2. Steady Income: Temporary Post-payable 3.5.2.1. Concept 3.5.2.2. Operation 3.5.3. Steady Income: Temporary - Prepayable 3.5.3.1. Concept 3.5.3.2. Operation 3.5.4. Steady Income: Temporary - Deferred 3.5.4.1. Concept 3.5.4.2. Operation 3.5.5. Steady income: Temporary - Anticipated 3.5.5.1. Concept 3.5.5.2. Operation 3.5.6. Steady Income: Perpetual 3.5.6.1. Concept 3.5.6.2. Operation 	3.6. Income Valuation. Variable Income 3.6.1. Variable Income in Geometric Progression 3.6.1.1. Temporal 3.6.1.2. Operation 3.6.1.2. Perpetual 3.6.1.2.2. Operation 3.6.2. Variable Income in Arithmetic Progression 3.6.2.1. Temporal 3.6.2.1. Concept 3.6.2.1. Concept 3.6.2.2. Operation 3.6.2.1. Concept 3.6.2.1. Concept 3.6.2.2. Operation 3.6.2.1. Concept 3.6.2.1. Concept 3.7.2. Operation 3.7.3. Variable Income in Fractional Arithmetic Progression 3.7.3. Operation	3.8.2.2. Operation 3.8.3. Variable Rate Loan and Constant

Mod	ule 4. Econometrics			
4.1.1. 4.1.2.	The Ordinary Least Squares (OLS) Method Linear Regression Models Types of Content General Line and OLS Estimation	 4.2. OLS Method in Other Scenarios 4.2.1. Abandoning Basic Assumptions 4.2.2. Method Behavior 4.2.3. Effect of Measurement Changes 	4.3. Properties of OLS Estimators4.3.1. Moments and Properties4.3.2. Variance Estimation4.3.3. Matrix Forms	4.4. OLS Variance Calculation4.4.1. Basic Concepts4.4.2. Hypothesis Testing4.4.3. Model Coefficients
4.5.2.	Hypothesis Testing in Linear Regression Models T-Contrast F-Contrast Global Contrasts	4.6. Confidence Intervals4.6.1. Objectives4.6.2. In a Coefficient4.6.3. In a Combination of Coefficients	 4.7. Specification Problems 4.7.1. Use and Concept 4.7.2. Types of Problems 4.7.3. Unobservable Explanatory Variables 	 4.8. Prediction in Linear Regression Models 4.8.1. Prediction 4.8.2. Average Value Intervals 4.8.3. Applications
4.9.2.	Residual Analysis in Linear Prediction Objectives and General Concepts Analysis Tools Waste Analysis	4.10. Qualitative Variables in GLRM I 4.10.1. Fundamentals 4.10.2. Models with Various Types of Information 4.10.3. Linear Metrics	4.11. Qualitative Variables in GLRM II 4.11.1. Binary Variables 4.11.2. Use of Dummy Variables 4.11.3. Time Series	4.12. Autocorrelation 4.12.1. Basic Concepts 4.12.2. Consequences 4.12.3. Contrast

4.13. Heteroscedasticity 4.13.1. Concept and Contrasts

4.13.2. Consequences 4.13.3. Time Series



A unique training experience that will make your decisions more effective and will accelerate your decisions in the real financial scenario"



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.

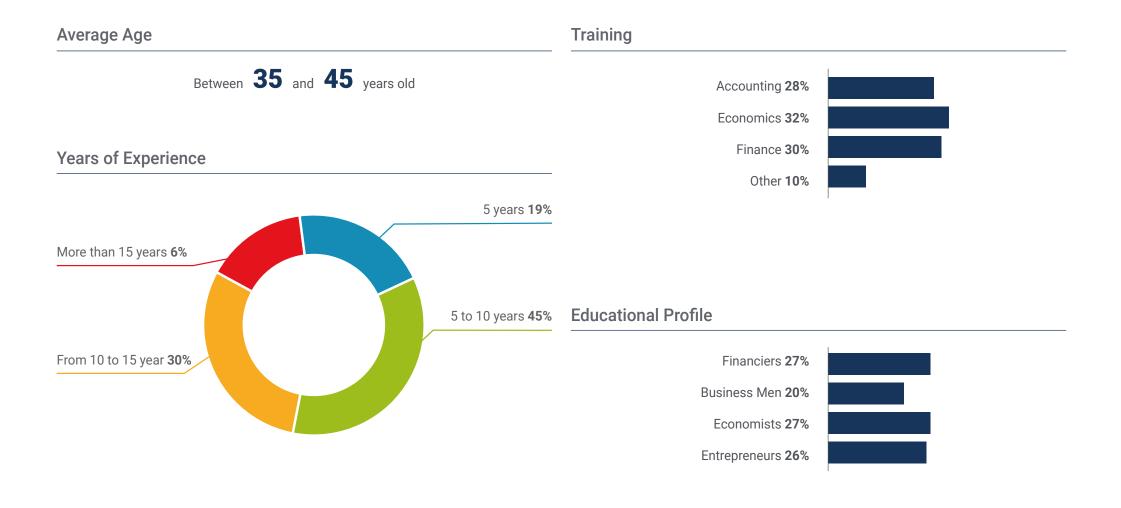


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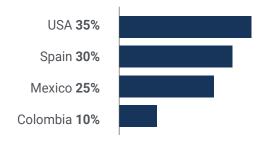




tech 36 | Our Students' Profiles



Geographical Distribution





Alberto Méndez

Entrepreneur with his own project

"This program has brought me closer to the intricacies of non-uniform fractional income valuation, linear regression models and general line and OLS estimation, among many other issues. It has been quite a discovery to put all the knowledge into practice in my own business, thanks to the theoretical-practical exercises and the guidance of the professors"





If you want to make a positive change in your profession, the Postgraduate Diploma in Predictive Statistics for Business and Risk Management will help you achieve it.

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

The Postgraduate Diploma in Predictive Statistics for Business and Risk Management from TECH is an intensive program that prepares to student to face challenges and business decisions in times of financial crisis. The main objective is to promote personal and professional growth. Helping students achieve success.

If the goal is to better yourself, make a positive change professionally and network with the best, this is the place.

Master the uses, techniques and methods of risk optimization to be applied in your organization, thanks to TECH.

Time of Change



Type of Change



Salary Increase

The completion of this program represents a salary increase of more than **25.3%** for our students.

Salary before

\$53,600

A salary increase of

25.3%

Salary after

\$67,100





tech 44 | Benefits for Your Company

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



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.



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 professional can work on a real project or develop new projects in the field of R & D or business development of your company.



Increased competitiveness

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





tech 48 | Certificate

This **Postgraduate Diploma in Predictive Statistics for Business and Risk Management** 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 Predictive Statistics for Business and Risk Management Official N° of Hours: 600 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.



Postgraduate Diploma Predictive Statistics for Business and Risk Management

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