

# Postgraduate Diploma

Technical Analysis, Fundamental  
Analysis and Algorithmic Trading



## Postgraduate Diploma Technical Analysis, Fundamental Analysis and Algorithmic Trading

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online
- » Target Group: University graduates who have previously completed any degree in the fields of Social and Legal Sciences, Administrative and Business Sciences, or Design and Artificial Intelligence

Website: [www.techtute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-technical-analysis-fundamental-analysis-algorithmic-trading](http://www.techtute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-technical-analysis-fundamental-analysis-algorithmic-trading)

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# 01

# Welcome

Technical Analysis, Fundamental Analysis and Algorithmic Trading are three key approaches to decision making in the financial markets. Technical analysis is based on the study of price charts, patterns and trading volumes to predict future movements. Fundamental analysis examines the underlying financial and economic aspects of a company or asset, such as financial reports, macroeconomic indicators and industry news. In addition, algorithmic trading has gained ground, using advanced mathematical algorithms and models to execute trades in an automated and rapid manner. In this scenario, TECH has implemented a flexible and fully online program, which will allow graduates to manage their study schedules, supported by the Relearning methodology.



Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading  
TECH Global University



“

*Thanks to this 100% online Postgraduate Diploma, you will delve into the financial markets, evaluating the behavior of prices and short-term patterns, as well as the economic and financial fundamentals of companies”*

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

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



### Academic Excellence

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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

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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 main objective of the university program will be to enable graduates to master advanced tools and techniques in the analysis of financial markets, both from a technical and fundamental perspective. In addition, they will be provided with the necessary knowledge to implement algorithmic trading strategies, optimizing the use of Artificial Intelligence and Machine Learning in decision making. Entrepreneurs will also be able to evaluate the performance of their strategies and manage the associated risks, in order to maximize profitability.



“

*You will be able to implement Artificial Intelligence solutions that allow you to analyze large volumes of data and predict market trends, as well as evaluate and manage risks effectively”*

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

Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading will enable students to:

01

Develop skills in visualization of technical indicators using tools such as Plotly, Dash and Matplotlib for dynamic analysis

04

Develop predictive time series and volatility models with LSTM and advanced Deep Learning techniques

02

Apply Machine Learning techniques for optimization and automation of financial technical indicators in real time

03

Implement quantitative algorithmic trading strategies with backtesting and reinforcement learning using QuantConnect





05

Optimize financial portfolios using genetic algorithms and ESG sustainability analysis to maximize returns

06

Apply automated fundamental analysis for company valuation and credit risk detection using Deep Learning and NLP

07

Perform financial fraud detection modeling and merger and acquisition evaluation using neural networks

08

Understand the principles and technologies of algorithmic and high-frequency trading, addressing risk, execution, and arbitrage



05

# Structure and Content

Through technical analysis, entrepreneurs will be able to interpret charts and price patterns to forecast future market movements. In addition, fundamental analysis will complement this training by providing an in-depth understanding of the economic, financial and business factors that affect the value of assets. Algorithmic trading topics will also be included, where automated investment strategies and the use of algorithms to optimize order execution and maximize returns will be addressed. This multidimensional approach will enable graduates to develop practical and theoretical skills to trade effectively in an increasingly complex financial environment.



“

*The Postgraduate Diploma will provide you with comprehensive training in the financial arena, focusing on the tools and techniques essential for informed decision making in the markets”*

## Syllabus

Technical Analysis, Fundamental Analysis and Algorithmic Trading are three key approaches to decision making in the financial markets. Currently, emerging technologies, such as Artificial Intelligence and machine learning, are transforming these approaches, making them more sophisticated and accessible to institutional and retail investors.

Accordingly, TECH has developed a Postgraduate Diploma that will offer a comprehensive education, enabling entrepreneurs to develop advanced strategies based on Artificial Intelligence, applicable in the field of financial services. In this sense, the different uses of AI for decision making will be examined, considering the associated risks and specific applications in areas such as portfolio management, identification of investment opportunities and automation of financial processes.

Likewise, professionals will focus on the use of advanced algorithmic trading techniques, which allow automating the purchase and sale of assets based on algorithms programmed to maximize performance. In addition, an in-depth analysis of the performance of applied strategies will be performed, using AI to improve predictive models, identify complex patterns and adjust operations to changing market conditions.

Therefore, TECH has created a comprehensive university program in a fully online format, making it easy for graduates to access educational materials from any electronic device with Internet access. This eliminates the obligation to travel to a physical space and follow established schedules. Additionally, the innovative Relearning methodology is applied, focused on the repetition of key concepts to guarantee a solid understanding of the content.

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

### Module 1

Technical Analysis of Financial Markets with Artificial Intelligence

### Module 2

Fundamental Analysis of Financial Markets with Artificial Intelligence

### Module 3

Algorithmic Trading Strategies



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

TECH offers the possibility of developing this Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading completely online. Throughout the 6 months of the educational program, the students will be able to access all the contents of this program at any time, allowing them to self-manage their study time.

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

**Module 1.** Technical Analysis of Financial Markets with Artificial Intelligence

**1.1. Analysis and Visualization of Technical Indicators with Plotly and Dash**

- 1.1.1. Implementation of Interactive Charts with Plotly
- 1.1.2. Advanced Visualization of Time Series with Matplotlib
- 1.1.3. Creating Real-Time Dynamic Dashboards with Dash

**1.2. Optimization and Automation of Technical Indicators with Scikit-learn**

- 1.2.1. Automation of Indicators with Scikit-learn
- 1.2.2. Optimization of Technical Indicators
- 1.2.3. Creating Personalized Indicators with Keras

**1.3. Financial Pattern Recognition with CNN**

- 1.3.1. Using CNN in TensorFlow to Identify Patterns in Charts
- 1.3.2. Improving Recognition Models with Transfer Learning Techniques
- 1.3.3. Validation of Recognition Models in Real-Time Markets

**1.4. Quantitative Trading Strategies with QuantConnect**

- 1.4.1. Building Algorithmic Trading Systems with QuantConnect
- 1.4.2. Backtesting Strategies with QuantConnect
- 1.4.3. Integrating Machine Learning into Trading Strategies with QuantConnect

**1.5. Algorithmic Trading with Reinforcement Learning Using TensorFlow**

- 1.5.1. Reinforcement Learning for Trading
- 1.5.2. Creating Trading Agents with TensorFlow Reinforcement Learning
- 1.5.3. Simulating and Tuning Agents in OpenAI Gym

**1.6. Time Series Modeling with LSTM in Keras for Price Forecasting**

- 1.6.1. Applying LSTM to Price Forecasting
- 1.6.2. Implementing LSTM Models in Keras for Financial Time Series
- 1.6.3. Optimization and Parameter Fitting in Time Series Models

**1.7. Application of Explainable Artificial Intelligence (XAI) in Finance**

- 1.7.1. Applicability of XAI in Finances
- 1.7.2. Applying LIME to Trading Models
- 1.7.3. Using SHAP for Feature Contribution Analysis in AI Decisions

**1.8. High-Frequency Trading (HFT) Optimized with Machine Learning Models**

- 1.8.1. Developing ML Models for HFT
- 1.8.2. Implementing HFT Strategies with TensorFlow
- 1.8.3. Simulation and Evaluation of HFT in Controlled Environments

**1.9. Volatility Analysis Using Machine Learning**

- 1.9.1. Applying Intelligent Models to Predict Volatility
- 1.9.2. Implementing Volatility Models with PyTorch
- 1.9.3. Integrating Volatility Analysis into Portfolio Risk Management

**1.10. Portfolio Optimization with Genetic Algorithms**

- 1.10.1. Fundamentals of Genetic Algorithms for Investment Optimization in Markets
- 1.10.2. Implementing Genetic Algorithms for Portfolio Selection
- 1.10.3. Evaluation of Portfolio Optimization Strategies

**Module 2. Fundamental Analysis of Financial Markets with Artificial Intelligence**

|  |   |  |   |
|--|---|--|---|
| <b>2.1. Predictive Financial Performance Modeling with Scikit-learn</b><br>2.1.1. Linear and Logistic Regression for Financial Forecasting with Scikit-learn<br>2.1.2. Using Neural Networks with TensorFlow to Forecast Revenues and Earnings<br>2.1.3. Validating Predictive Models with Cross-Validation Using Scikit-learn | <b>2.2. Valuation of Companies with Deep Learning</b><br>2.2.1. Automating the Discounted Cash Flows (DCF) Model with TensorFlow<br>2.2.2. Advanced Valuation Models Using PyTorch<br>2.2.3. Integration and Analysis of Multiple Valuation Models with Pandas  | <b>2.3. Analysis of Financial Statements with NLP Using ChatGPT</b><br>2.3.1. Extracting Key Information from Annual Reports with ChatGPT<br>2.3.2. Sentiment Analysis of Analyst Reports and Financial News with ChatGPT<br>2.3.3. Implementing NLP Models with Chat GPT for Interpreting Financial Texts | <b>2.4. Risk and Credit Analysis with Machine Learning</b><br>2.4.1. Credit Scoring Models Using SVM and Decision Trees in Scikit-learn<br>2.4.2. Credit Risk Analysis in Corporations and Bonds with TensorFlow<br>2.4.3. Visualization of Risk Data with Tableau                |
| <b>2.5. Credit Analysis with Scikit-learn</b><br>2.5.1. Implementing Credit Scoring Models<br>2.5.2. Credit Risk Analysis with RandomForest in Scikit-learn<br>2.5.3. Advanced Visualization of Credit Scoring Results with Tableau  | <b>2.6. ESG Sustainability Assessment with Data Mining Techniques</b><br>2.6.1. ESG Data Mining Methods<br>2.6.2. ESG Impact Modeling with Regression Techniques<br>2.6.3. Applications of ESG Analysis in Investment Decisions   | <b>2.7. Sector Benchmarking with Artificial Intelligence Using TensorFlow and Power BI</b><br>2.7.1. Comparative Analysis of Companies Using AI<br>2.7.2. Predictive Modeling of Sector Performance with TensorFlow<br>2.7.3. Implementing Industry Dashboards with Power BI                               | <b>2.8. Portfolio Management with AI Optimization</b><br>2.8.1. Portfolio Optimization<br>2.8.2. Use of Machine Learning Techniques for Portfolio Optimization with Scikit-Optimize<br>2.8.3. Implementing and Evaluating the Effectiveness of Algorithms in Portfolio Management |
| <b>2.9. Financial Fraud Detection with AI Using TensorFlow and Keras</b><br>2.9.1. Basic Concepts and Techniques of Fraud Detection with AI<br>2.9.2. Constructing Neural Network Detection Models in TensorFlow<br>2.9.3. Practical Implementation of Fraud Detection Systems in Financial Transactions                       | <b>2.10. Analysis and Modeling in Mergers and Acquisitions with AI</b><br>2.10.1. Using Predictive AI Models to Evaluate Mergers and Acquisitions<br>2.10.2. Simulating Post-Merger Scenarios Using Machine Learning Techniques<br>2.10.3. Evaluating the Financial Impact of M&A with Intelligent Models |  |   |

**Module 3. Algorithmic Trading Strategies**

**3.1. Fundamentals of Algorithmic Trading**

- 3.1.1. Algorithmic Trading Strategies
- 3.1.2. Key Technologies and Platforms for the Development of Algorithmic Trading Algorithms
- 3.1.3. Advantages and Challenges of Automated Trading versus Manual Trading

**3.2. Design of Automated Trading Systems**

- 3.2.1. Structure and Components of an Automated Trading System
- 3.2.2. Algorithm Programming: from the Idea to the Implementation
- 3.2.3. Latency and Hardware Considerations in Trading Systems

**3.3. Backtesting and Evaluation of Trading Strategies**

- 3.3.1. Methodologies for Effective Backtesting of Algorithmic Strategies
- 3.3.2. Importance of Quality Historical Data in Backtesting
- 3.3.3. Key Performance Indicators for Evaluating Trading Strategies

**3.4. Optimizing Strategies with Machine Learning**

- 3.4.1. Applying Supervised Learning Techniques in Strategy Improvement
- 3.4.2. Using Particle Swarm Optimization and Genetic Algorithms
- 3.4.3. Challenges of Overfitting in Trading Strategy Optimization

**3.5. High Frequency Trading (HFT)**

- 3.5.1. Principles and Technologies behind HFT
- 3.5.2. Impact of HFT on Market Liquidity and Volatility
- 3.5.3. Common HFT Strategies and Their Effectiveness

**3.6. Order Execution Algorithms**

- 3.6.1. Types of Execution Algorithms and Their Practical Application
- 3.6.2. Algorithms for Minimizing the Market Impact
- 3.6.3. Using Simulations to Improve Order Execution

**3.7. Arbitration Strategies in Financial Markets**

- 3.7.1. Statistical Arbitrage and Price Merger in Markets
- 3.7.2. Index and ETF Arbitrage
- 3.7.3. Technical and Legal Challenges of Arbitrage in Modern Trading.

**3.8. Risk Management in Algorithmic Trading**

- 3.8.1. Risk Measures for Algorithmic Trading
- 3.8.2. Integrating Risk Limits and Stop-Loss in Algorithms
- 3.8.3. Specific Risks of Algorithmic Trading and How to Mitigate Them

**3.9. Regulatory Aspects and Compliance in Algorithmic Trading**

- 3.9.1. Global Regulations Impacting Algorithmic Trading
- 3.9.2. Regulatory Compliance and Reporting in an Automated Environment
- 3.9.3. Ethical Implications of Automated Trading

**3.10. Future of Algorithmic Trading and Emerging Trends**

- 3.10.1. Impact of Artificial Intelligence on the Future Development of Algorithmic Trading
- 3.10.2. New Blockchain Technologies and Their Application in Algorithmic Trading
- 3.10.3. Trends in Adaptability and Customization of Trading Algorithms





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*You will design predictive models that analyze patterns of behavior in the markets, anticipating movements and improving asset management, thanks to an extensive library of innovative multimedia resources”*

06

# Study Methodology

TECH is the first university in the world to combine case study methodology with Relearning, a 100% online learning system based on guided repetition.

This innovative pedagogical strategy has been conceived to offer professionals the opportunity to update knowledge and develop skills in an intensive and rigorous way. A learning model that places the student at the center of the academic process and gives them the leading role, adapting to their needs and leaving aside the more conventional methodologies.



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*TECH prepares you to face new challenges in uncertain environments and achieve success in your career”*

## The student: the priority of all TECH programs

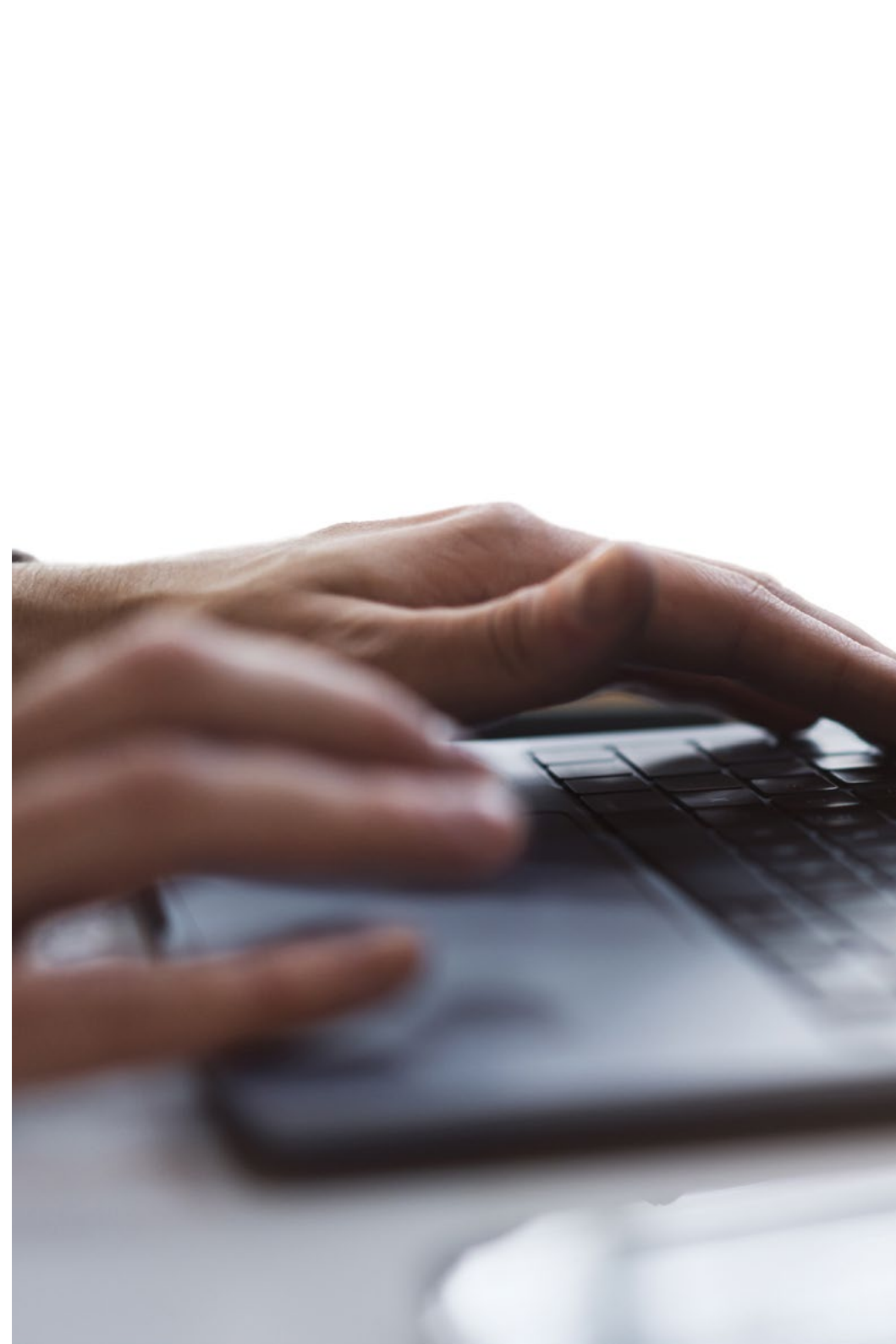
In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes  
(which you might not be able to attend)”*



### **The most comprehensive study plans at the international level**

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“

*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”*

## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

*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.*



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”*

### The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the quality of teaching, quality of materials, course structure and objectives is excellent. Not surprisingly, the institution became the best rated university by its students on the Trustpilot review platform, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### Interactive Summaries

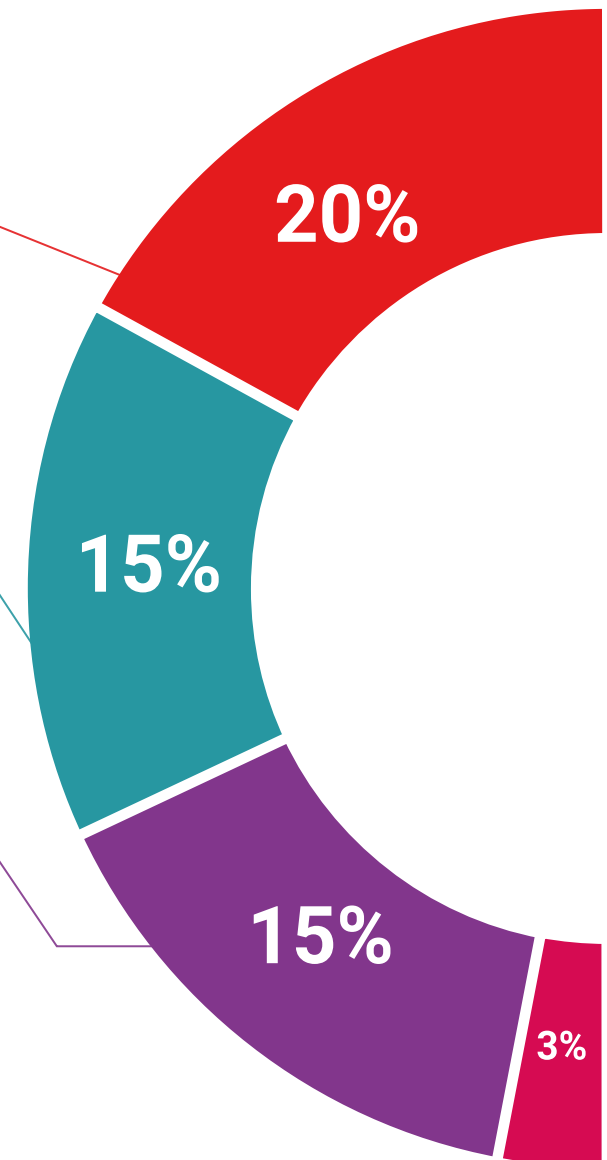
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

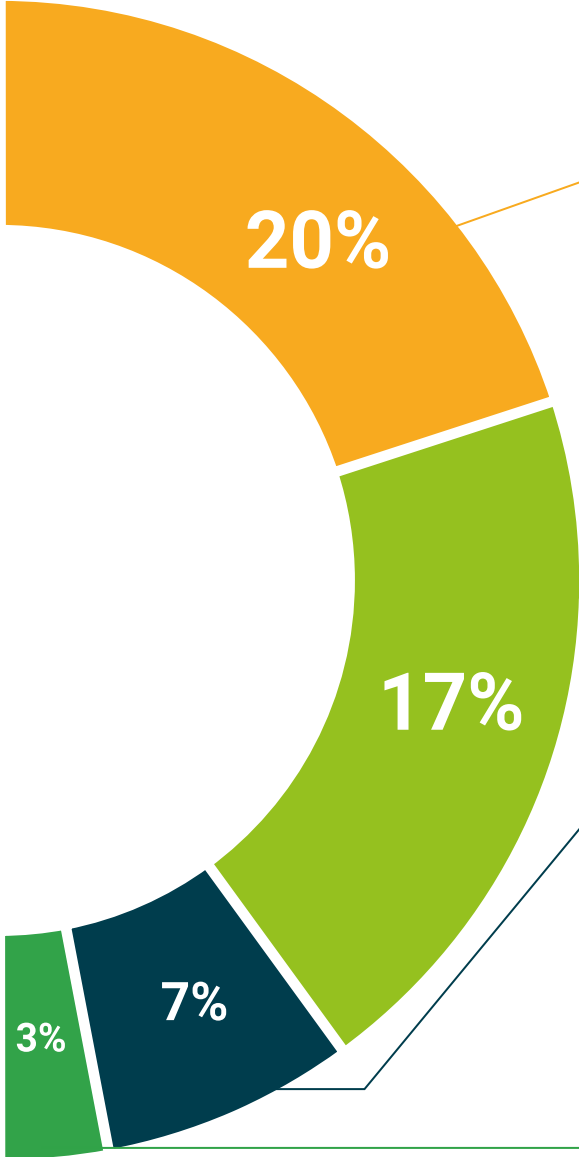
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





**Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



**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 for future difficult decisions.



**Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



07

# Our Students' Profiles

The students of the university program are professionals with training in areas such as Economics, Finance, Business Administration or Artificial Intelligence, who seek to specialize in market analysis and improve their trading skills. Therefore, this profile includes both individual investors, who wish to deepen their knowledge to manage their portfolio more effectively, and professionals in the financial sector, who seek to update and acquire skills in algorithmic trading and data analysis. In this way, the diversity of participants with different academic profiles and coming from multiple nationalities makes up the multidisciplinary approach of this program.





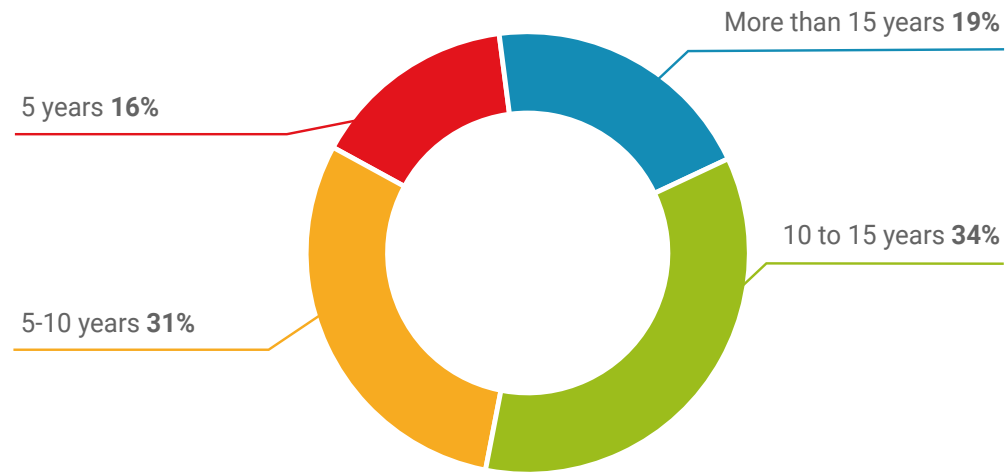
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*Students should show a strong interest in new technologies, statistics and global economics, which will allow them to approach financial analysis from both a quantitative and qualitative perspective”*

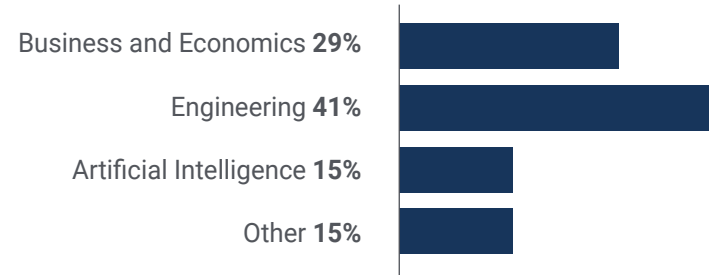
### Average Age

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

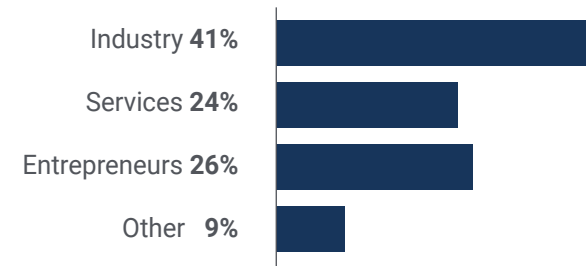
### Years of Experience



### Training

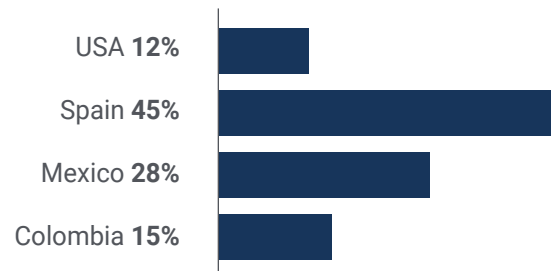


### Academic Profile



## Geographical Distribution

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## Dolores Martínez Pérez

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Investment Consultant

*"I just finished the Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading at TECH, and I couldn't be happier with my experience. The teachers are a real marvel; not only do they have a deep knowledge, but they also know how to transmit it in a very accessible and dynamic way. Each class was a perfect blend of theory and practice, which made the entire syllabus come alive. I felt supported at all times and the tools I acquired have given me incredible confidence to enter the world of trading. Definitely a worthwhile investment!"*

08

# Course Management

The faculty of this academic program is made up of renowned professionals with extensive experience in the financial markets, both at an academic and practical level. In fact, it includes experts in stock exchange and financial markets, as well as specialists in Artificial Intelligence applied to finance. Therefore, its pedagogical approach will combine theoretical rigor with real case studies, providing graduates with a solid and updated training. In addition, these mentors will keep abreast of the latest trends and technologies in the financial field.







“

*Thanks to the excellent teaching staff, this Postgraduate Diploma will ensure you acquire cutting-edge skills to effectively face any challenge in today's global market”*

## Management



### **Dr. Peralta Martín-Palomino, Arturo**

- ♦ CEO and CTO at Prometheus Global Solutions
- ♦ CTO at Korporate Technologies
- ♦ CTO at AI Shepherds GmbH
- ♦ Consultant and Strategic Business Advisor at Alliance Medical
- ♦ Director of Design and Development at DocPath
- ♦ PhD in Psychology from the University of Castilla La Mancha
- ♦ PhD in Economics, Business and Finance from the Camilo José Cela University
- ♦ PhD in Psychology from University of Castilla La Mancha
- ♦ Master's Degree in Executive MBA from the Isabel I University
- ♦ Master's Degree in Sales and Marketing Management, Isabel I University
- ♦ Expert Master's Degree in Big Data by Hadoop Training
- ♦ Master's Degree in Advanced Information Technologies from the University of Castilla La Mancha
- ♦ Member of the research group SMILE

## Professors

### Mr. Sánchez Mansilla, Rodrigo

- ◆ Digital Advisor at AI Shepherds GmbH
- ◆ Digital Account Manager at Kill Draper
- ◆ Head of Digital at Kuarere
- ◆ Digital Marketing Manager at Arconi Solutions, Deltoid Energy and Brinergy Tech
- ◆ Founder and National Sales and Marketing Manager
- ◆ Master's Degree in Digital Marketing (MDM) by The Power Business School
- ◆ Bachelor's Degree in Business Administration (BBA) from the University of Buenos Aires

“

*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice”*

09

# Impact on Your Career

The impact of this academic program on a graduate's career will be significant and transformative. By acquiring advanced knowledge and practical skills in financial market analysis, they will position themselves as highly competent and competitive professionals in a constantly evolving industry. In addition, they will receive comprehensive training, enabling them to make informed and strategic decisions, which will not only improve their personal trading performance, but also open doors to job opportunities in financial institutions, investment funds and technology companies.



“

*You will be equipped with algorithmic trading tools, becoming a key player at the forefront of financial innovation, contributing to the development of modern investment strategies adapted to the challenges of the market”*

*This Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading will give you a key competitive advantage in strategic financial decision making. With all TECH's quality guarantees!*

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

TECH's Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading is an intensive program that prepares you to face challenges and business decisions in the field of Artificial Intelligence applied to the Stock Market and Financial Markets. The main objective is to promote your personal and professional growth. Helping you achieve success.

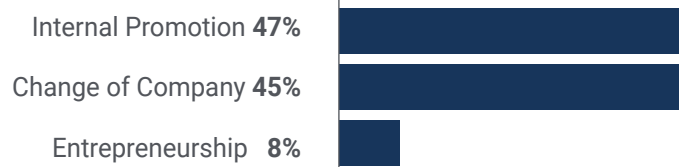
If you want to improve yourself, make a positive change at a professional level, and network with the best, then this is the place for you.

*Bet on TECH! Thanks to advanced Artificial Intelligence tools you will be able to diversify your investments, make more informed decisions and improve the profitability of your financial operations.*

### Time of Change



### Type of change



## Salary increase

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This program represents a salary increase of more than **26.24%** for our students



10

# Benefits for Your Company

By understanding the principles of technical and fundamental analysis, entrepreneurs will be able to better evaluate investment opportunities and more efficiently manage the risks associated with assets. In addition, knowledge of algorithmic trading will enable them to implement automated strategies that optimize order execution, improve trading efficiency and boost returns. This will not only translate into higher profitability, but will also improve their ability to adapt to market fluctuations, allowing them to stay ahead of trends and take advantage of emerging opportunities.





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*The entrepreneur will obtain a significant benefit for their business, as they will gain control of tools and knowledge that will enable them to make more informed and strategic decisions in the financial environment”*

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.

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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.

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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.

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06

### **Increased competitiveness**

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

11

# Certificate

The Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading 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 Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading** 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.

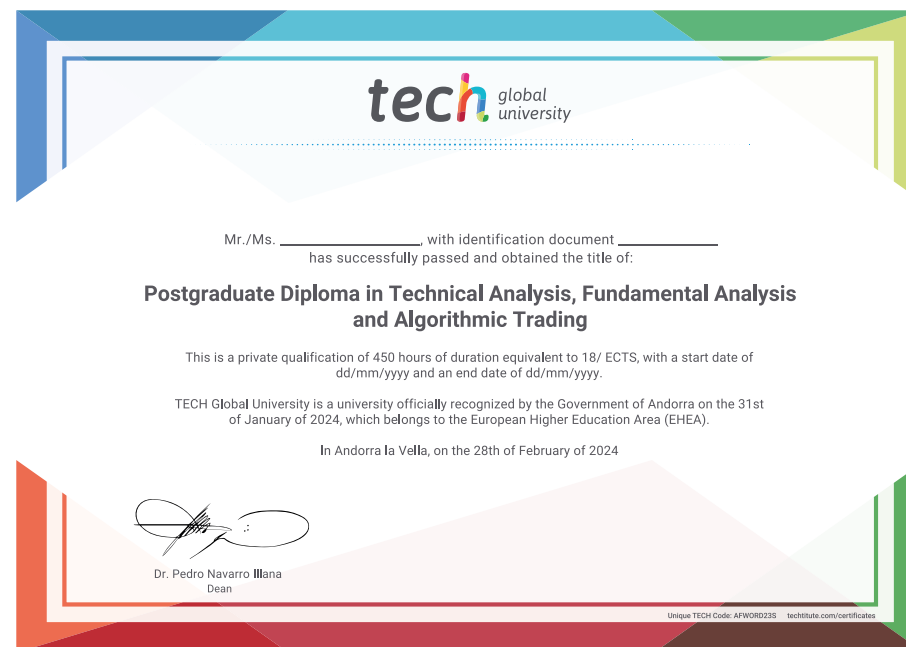
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Technical Analysis, Fundamental Analysis and Algorithmic Trading**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**





## Postgraduate Diploma Technical Analysis, Fundamental Analysis and Algorithmic Trading

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Accreditation: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

# Postgraduate Diploma

Technical Analysis, Fundamental Analysis and Algorithmic Trading