

Postgraduate Diploma Visualization Techniques and Tools





Postgraduate Diploma Visualization Techniques and Tools

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online
- » Target Group: Graduates or professionals of any specialty who want to be qualified in the application of data visualization technologies, Big Data and artificial intelligence for the development, boost or change of direction of their professional career

Website: www.techtute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-visualization-techniques-tools

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01

Welcome

Data analytics and Big Data are the future for many companies that are beginning to incorporate analytics as a key tool in the normal course of their business. Thanks to this analysis of your customer and market behavior, you can gain a competitive advantage over other companies in the sector and achieve better business results. Being a task of vital importance and with high expectations of economic growth, TECH has prepared this program, with which professionals will specialize in data visualization techniques and tools that will allow them to stand out in the labor market and gain access to bigger and better paid jobs.



Postgraduate Diploma in Visualization Techniques and Tools.
TECH Technological University



“

To work with large volumes of data, it is necessary to understand the sources of information, as well as the value they bring to the creation of new innovative business models”

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 centre for intensive managerial skills training.



“

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 combines 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.

100,000+
executives trained each year

200+
different nationalities



Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

500+ | collaborative agreements with leading companies



Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



Analysis

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



Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning 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.



Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a groundbreaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.



Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



At TECH you will have access to Harvard Business School case studies"

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 training of the highest academic level"

This program will provide students with a multitude of professional and personal advantages, particularly the following:

01

A significant career boost

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 participants achieve positive career development in less than 2 years.

02

Develop a strategic and global vision of companies

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

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

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 areas 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

Be part of an exclusive community

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

We give you the opportunity to train with a team of world renowned teachers.

04

Objectives

This program aims to promote the personal and professional growth of students by offering them quality content, adapted to the new market demands in terms of data analytics and interpretation. To this purpose, TECH makes sure that the experts in charge of developing the educational material pour all their expertise and knowledge into the practical and theoretical examples that students will go through throughout the program.



“

Solving problems related to Big Data and proper data visualization will be your big asset to propel your career into higher-profile management positions”

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

The Postgraduate Diploma in Visualization Techniques and Tools prepares students to:

01

Understand the different techniques for data analysis

04

Identify techniques oriented to statistical analysis, artificial intelligence and mass data processing.

02

Design joint strategies of statistical and artificial intelligence techniques for the development of descriptive and predictive systems applied to the reality of a dataset

05

Know the environments most used by Data Scientists

03

Understand the operation and characteristics of common mass data processing techniques

06

Know how to process data in different formats from different sources



07

Learn the need to ensure data accuracy prior to data processing

08

Identify new technologies as pedagogical tools in the communication of the different business realities

09

Know the latest trends in the creation of intelligent entities based on Deep learning and neural networks

10

Know the artificial intelligence techniques applicable for massively parallelized data processing on a given data set and according to previously defined requirements

13

Identify commercial and open software tools oriented to statistical analysis, artificial intelligence and mass data processing

11

Know how to manage large volumes of data in a distributed manner

14

Know how to generate diagrams that visually represent the chosen situation from a set of data

12

Understand the operation and characteristics of common mass data processing techniques

15

Be able to combine the different techniques studied for the design of original visualizations

**16**

Understand how, starting from a design and a set of previous data, a visualization implementation that meets the defined requirements can be carried out

17

Identify the usability and interactivity needs of data visualization methods and be able to develop a new version of the visualization that improves these aspects

18

Design a system that combines data capture and storage techniques, as well as data analysis and visualization, to represent existing patterns in that data set

05

Structure and Content

The structure and content of this Postgraduate Diploma have been developed by a team of professionals who are experts in data collection and visualization of all types of data, so students are guaranteed access to quality educational material that meets current technological requirements. This program will be a unique educational experience for students, as TECH uses the latest methodology available to ensure effective and long-lasting teaching.



“

With data analysis becoming more and more important in all types of sectors, this specialization will open the doors to managerial positions in the present and future of the business field of your choice”

Syllabus

This Postgraduate Diploma teaches students all kinds of data analysis techniques and tools, with extensive knowledge of the main management systems so that they master all the aspects required of professional managers in this branch of business.

It is, therefore, a syllabus that focuses on students' professional improvement through successful teaching. Supported by the team of professionals that TECH has assembled, students will be advised at all times on any questions or doubts that may arise, even generating future useful contacts in their business career.

In addition, over the 600 hours of the program, students are also involved in real case studies where they can learn about the exact application of the analytical methodologies learned during the program, which helps them to have a much better and more contextual understanding of all the knowledge imparted.

This Postgraduate Diploma takes place over 6 months and is divided into 4 modules:

Module 1. Data and AI Analysis Techniques

Module 2. Data Analysis Tools

Module 3. Database Management and Data Parallelization Systems

Module 4. Visualization Tools



Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Diploma completely online. Over the course of 6 months, 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.

Module 1. Data and AI Analysis Techniques

1.1. Predictive Analytics	1.2. Evaluation Techniques and Model Selection	1.3. Lineal Optimization Techniques	1.4. Montecarlo Simulations
1.5. Scenario Analysis	1.6. Machine Learning Techniques	1.7. Web Analytics	1.8. Text Mining Techniques
1.9. Methods of Natural Language Processing (NLP)	1.10. Social Network Analytics		

Module 2. Data Analysis Tools

2.1. Data Science R Environment	2.2. Data Science Python Environment	2.3. Static and Statistical Graphs	2.4. Data Processing in Different Formats and Different Sources
2.5. Data Cleaning and Preparation	2.6. Exploratory Studies	2.7. Decision Trees	2.8. Classification and Association Rules
2.9. Neural Networks	2.10. Deep Learning		

Module 3. Database Management and Data Parallelization Systems

3.1. Conventional Databases	3.2. Non-Conventional Databases	3.3. Cloud Computing: Distributed Data Management	3.4. Tools for the Ingestion of Large Volumes of Data
3.5. Types of Parallels	3.6. Data Processing in Streaming and Real Time	3.7. Parallel Processing: Hadoop	3.8. Parallel Processing: Spark
3.9. Apache Kafka 3.9.1. Introduction to Apache Kafka 3.9.2. Architecture 3.9.3. Data Structure 3.9.4. API Kafka 3.9.5. Case Uses	3.10. Cloudera Impala		

Module 4. Visualization Tools

4.1. Introduction to Data Visualization Tools	4.2. Many Eyes	4.3. Google Charts	4.4. jQuery
4.5. Data-Driven Documents I	4.6. Data-Driven Documents II	4.7. Matlab	4.8. Tableau
4.9. SAS Visual Analytics	4.10. Microsoft Power BI		



You will be the database and analytical visualization expert who gets the best jobs in your industry”

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





“

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

TECH Business School uses the Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”



This program prepares you to face business challenges in uncertain environments and achieve business success.



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.

Relearning Methodology

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

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

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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

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



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

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

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

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

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



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



Study Material

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

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



Classes

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

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



Management Skills Exercises

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



Additional Reading

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





Case Studies

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



Interactive Summaries

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

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



Testing & Retesting

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



07

Our Students' Profiles

Due to the great versatility of knowledge of this program, students' profile is varied, coming from the IT field as well as from the business or entrepreneurial sector. This demonstrates the usefulness of the knowledge taught, which can be critical in a multitude of business fields.





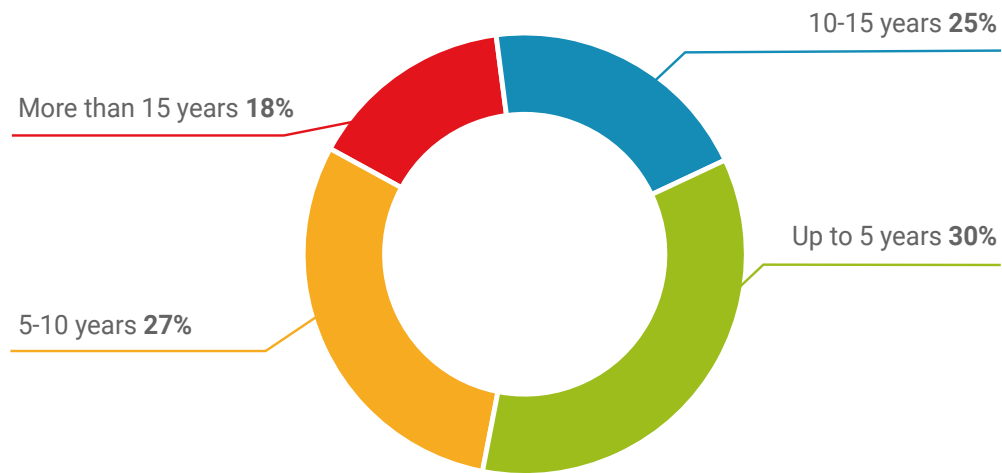
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With this program, your future career will be more prosperous, and you may even redirect your career to a field with greater possibilities or that is of more interest to you”

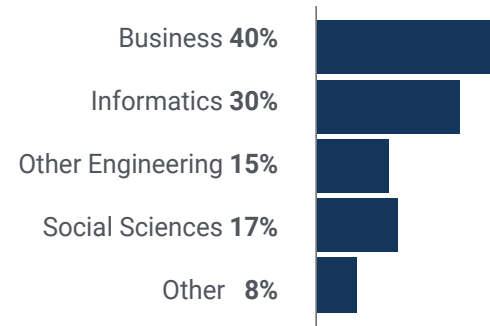
Average Age

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

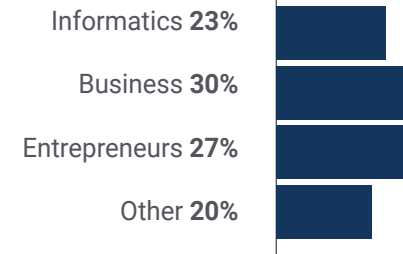
Years of Experience



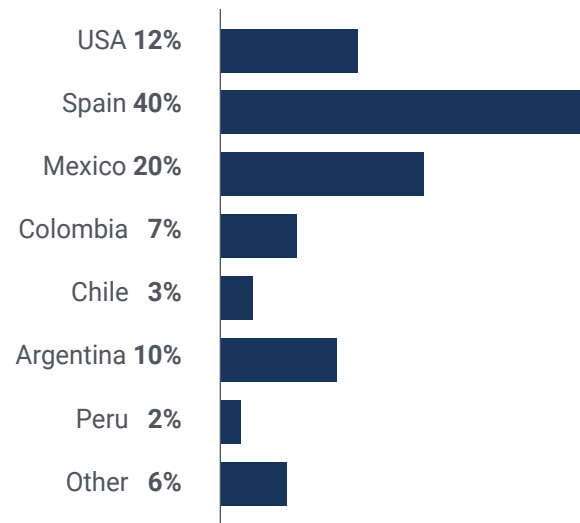
Education



Educational Profile



Geographical Distribution



Sofía Ruiz López

Visual Analytics Expert

"Specializing with TECH in Visualization Techniques and Tools has been a wonderful experience due to the program's teaching staff, composed of professionals in the sector, and the innovative and quality syllabus that has allowed me to update my resources and apply them in the day-to-day of my profession"

08

Course Management

This Postgraduate Diploma has a highly qualified team with extensive experience in the sector, which will offer the best tools for students to develop their skills during the course. A teaching staff of industry professionals will invest their theoretical and practical knowledge to lead you to the highest level of expertise. In this way, students have the guarantees they need to specialize at an international level in a booming sector that will catapult them to professional success.



“

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

Management



Mr. Galindo, Luis Ángel

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

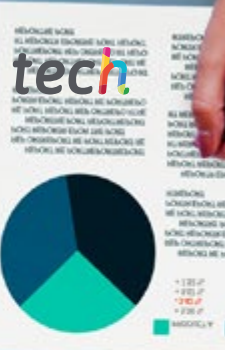
Professors

Mr. Almansa, Antonio

- ◆ Senior Technician: operation, engineering and architecture of the Data Center (DC) networks, located in Independencia and Orduña, as well as the transport network at national level for tariffs and discharges
- ◆ Level 2 Expert: design and implementation of the networks (with technological change) of the DC of Fco. Sancha and later Manuel Tovar
- ◆ Design, implementation and integration of the Julian Camarillo DC contingency center

Mr. García, Felipe

- ◆ Degree in IT from the Polytechnic University of Madrid
- ◆ Doctoral Thesis on "Wisdom Collective Intelligence"
- ◆ Founding Partner and President of KNOWDLE AI TECHNOLOGIES GROUP
- ◆ President promoter of the KNOWDLE CONSORTIUM GROUP ASSOCIATION
- ◆ Promoter and president of the KNOWDLE FOUNDATION & RESEARCH INSTITUTE with an ecosystem of startups in acceleration under the same technology of Collective Artificial Intelligence



09

Impact on Your Career

TECH knows that its students must make a considerable effort both financially, professionally and personally to pursue their studies, so all efforts are focused on students obtaining quality knowledge from highly qualified professionals in the data analysis sector. Given the high demand for these skills, the vast majority of students tend to notice a positive change in their career shortly after completing this program.



“

Enroll today in this Postgraduate Diploma in Visualization Techniques and Tools and don't wait any longer to obtain the professional improvement you are looking for"

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

The effort made by students to take this program is rewarded in an improvement that not only affects them professionally, but also personally, by giving them access to a network of contacts and potential business partners with whom to build a better future thanks to data analysis and visualization.

An excellent professional development awaits you.

The best way to achieve professional change is to increase your skills. So don't stop studying at TECH.

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

Time of change



Type of change



Salary increase

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



10

Benefits for Your Company

All companies today, whatever their industry, will benefit from having a person highly skilled in the analysis, storage and interpretation of data of all kinds in its staff. Thanks to the good work of TECH's qualified workers, the company will improve its results and will be able to focus its actions much better towards the most interesting and valuable public.





“

You have an unrepeatable opportunity for improvement within your reach. Don't let it pass you by and enroll today at TECH”

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

01

Intellectual Capital and Talent Growth

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.

02

Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.

03

Building agents of change

The graduates will be able to make decisions in times of uncertainty and crisis, helping the organization to overcome obstacles.

04

Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.



05

Project Development

The professionals can work on a real project or develop new projects in the field of R&D or Business Development of their company.

06

Increased Competitiveness

This Postgraduate Diploma will equip professionals with the skills to take on new challenges and therefore drive the organization forward.

11

Certificate

This Postgraduate Diploma in Visualization Techniques and Tools guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



“

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

This **Postgraduate Diploma in Visualization Techniques and Tools** contains the most complete and up-to-date program on the market.

After passing the assessments, students receive their **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma 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 Techniques and Tools in Visualization**

Official No. of Hours: **600 h.**



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



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- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

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