

Postgraduate Certificate Biomedical Databases, the Foundations of Big Data





Postgraduate Certificate Biomedical Databases, the Foundations of Big Data

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » 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/us/school-of-business/postgraduate-certificate/biomedical-databases-foundations-big-data

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01 Welcome

The numerous applications that have arisen around the development of Big Data and its application in medicine have made it possible to optimize patient information management processes, making it possible to cross-reference data that can predict the onset of certain diseases, as well as recommend treatments based on the person's clinical condition. This is why it is a sector with multiple job opportunities and in which any specialized professional can guarantee a successful business future. For this reason, TECH has considered it necessary to design this program, so that the graduate can get up-to-date in relation to Biomedical Databases, while improving their leadership skills. A 100% online program that is austere, comprehensive and dynamic and will elevate you to the top of the industry in only 180 hours.



Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data.
TECH Global University



“

With this Postgraduate Certificate you will make a qualitative leap in your professional career, standing out in any selection process due to the specialty of your knowledge and your leadership skills”

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 Global University



Innovation

The university offers an online learning model that balances the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"*Microsoft Europe Success Story*", for integrating the innovative, interactive multi-video system.



The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95% | of TECH students successfully complete their studies



Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

+100000

executives prepared each year

+200

different nationalities



Empowerment

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

+500

collaborative agreements with leading companies



Talent

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

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



Multicultural Context

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

TECH students represent more than 200 different nationalities.



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



Analysis

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



Academic Excellence

TECH offers students the best online learning methodology. The university combines the *Relearning* 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 the most rigorous and up-to-date case analyses in academia"

03

Why Our Program?

Studying this TECH program means increasing your 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. You 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 Global University community.

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

04 Objectives

The design of this Postgraduate Certificate has been carried out with the objective that the graduates who access it can expand their knowledge in relation to Biomedical Databases and their application in the business sector. For this, TECH will provide the professional with the best strategies, protocols and techniques, through which they will be able to improve their professional and leadership skills in just 180 hours and 100% online.



“

Are you looking for a program that develops the key concepts of entrepreneurship and innovation in e-Health? You are, then, in front of the best option in the academic market”

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

The Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data will enable students to:

01

Understand the concept of biomedical information databases

04

Compile models that are useful in predicting outcomes

02

Examine the different types of biomedical information databases



03

Study data analysis methods in depth

05

Analyze patient data and organize it logically

06

Report on large amounts of information

08

Utilize tools for bioprocess engineering



09

Collect e-Health success stories and mistakes to avoid

07

Determine the main lines of research and testing

10

Apply the knowledge acquired to an original business idea

05

Structure and Content

This Postgraduate Certificate has been developed by TECH and its group of experts based on the latest information from the Telemedicine and Big Data sector. It also includes hours of high-quality additional material presented in different formats: detailed videos, images, research articles, additional readings and real case studies. All this so that the graduate can delve into the aspects of the syllabus in a personalized way, being able to get the most out of this academic experience.



“

The variety of additional material that you will find in the Virtual Classroom will help you to contextualize the information in the syllabus, as well as to delve deeper into the aspects that you consider most important”

Syllabus

For the development of the syllabus of this Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data, TECH has taken into consideration the criteria of the teaching staff, which has worked to form a dynamic and comprehensive syllabus based on the latest developments in the area of Telemedicine.

This is a 180-hour program with the best theoretical, practical and additional content, which also includes a multitude of case studies. In this way, during the 6 weeks in which it is developed, the graduate will be able, in addition to updating, to work on the improvement of their professional skills and competences.

It is, therefore, a unique opportunity to become the manager that today's companies are looking for, through an austere and dynamic specialization thanks to which they will master all aspects related to the management of databases, their types, the development of management plans in research, the control of self-reported patient repositories and much more.

This Postgraduate Certificate is developed over 6 weeks and is divided into 1 module:

Module 1

Biomedical Databases



Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data completely online. During the 6 weeks of the specialization, the student will be able to access all the contents of this program at any time, which will allow the students 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. Biomedical Databases

1.1. Biomedical Databases

- 1.1.1. Biomedical Databases
- 1.1.2. Primary and Secondary Databases
- 1.1.3. Major Databases

1.2. DNA Databases

- 1.2.1. Genome Databases
- 1.2.2. Gene Databases
- 1.2.3. Mutations and Polymorphisms Databases

1.3. Protein Databases

- 1.3.1. Primary Sequence Databases
- 1.3.2. Secondary Sequence and Domain Databases
- 1.3.3. Macromolecular Structure Databases

1.4. Omics Projects Databases

- 1.4.1. Genomics Studies Databases
- 1.4.2. Transcriptomics Studies Databases
- 1.4.3. Proteomics Studies Databases

1.5. Genetic Diseases Databases. Personalized and Precision Medicine

- 1.5.1. Genetic Diseases Databases
- 1.5.2. Precision Medicine. The Need to Integrate Genetic Data
- 1.5.3. Extracting Data from OMIM

1.6. Self-Reported Patient Repositories

- 1.6.1. Secondary Data Use
- 1.6.2. Patients' Role in Deposited Data Management
- 1.6.3. Repositories of Self-Reported Questionnaires. Examples:

1.7. Elixir Open Databases

- 1.7.1. Elixir Open Databases
- 1.7.2. Databases Collected on the Elixir Platform
- 1.7.3. Criteria for Choosing between Databases

1.8. Adverse Drug Reactions (ADRs) Databases

- 1.8.1. Pharmacological Development Processes
- 1.8.2. Adverse Drug Reaction Reporting
- 1.8.3. Adverse Reaction Repositories at European and International Levels

1.9. Research Data Management Plans. Data to be Deposited in Public Databases

- 1.9.1. Data Management Plans
- 1.9.2. Data Custody in Research
- 1.9.3. Data Entry in Public Databases

1.10. Clinical Databases. Problems with Secondary Use of Health Data

- 1.10.1. Medical Record Repositories
- 1.10.2. Data Encryption
- 1.10.3. Access to Health Data



“

You will work on the development of data management plans in research, being able to include in your resume this in-demand skill in today's job market”

06

Methodology

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

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





“

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

TECH Business School uses the Case Study to contextualize all content

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

“

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



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



A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and business reality is taken into account.

“

You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments”

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.

Our program prepares you to face new challenges in uncertain environments and achieve success in your career.

Relearning Methodology

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

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

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

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

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



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

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

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

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

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



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



Study Material

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

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



Classes

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

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



Management Skills Exercises

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



Additional Reading

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





Case Studies

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



Interactive Summaries

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

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



Testing & Retesting

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



07

Our Students' Profiles

The Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data is aimed at graduates, postgraduates and university graduates who have previously completed any of the following programs in the fields of Social and Legal Sciences, Administration and Economics.

This program uses a multidisciplinary approach as the students have a diverse set of academic profiles and represent multiple nationalities.

The Postgraduate Certificate may also be taken by professionals who, being university graduates in any area, have two years of work experience in the field of bioinformatics in Telemedicine.





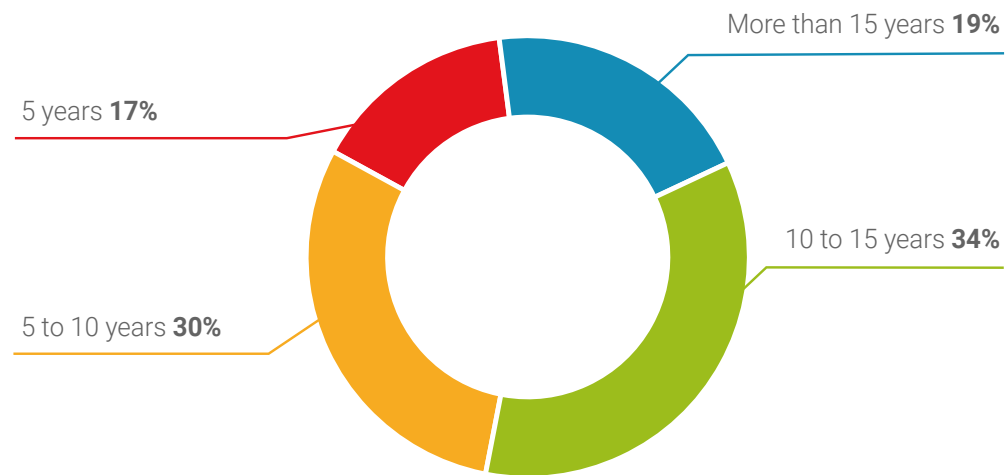
“

A unique academic experience that you will share with professionals with your same ambitions and professional goals”

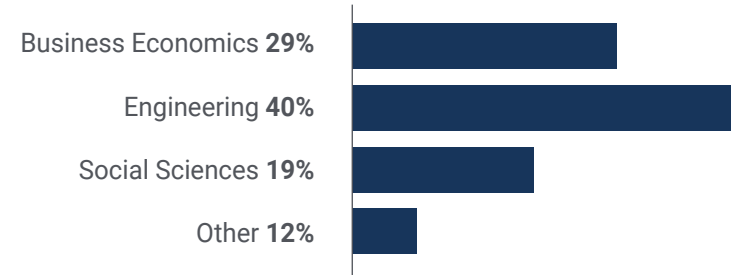
Average Age

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

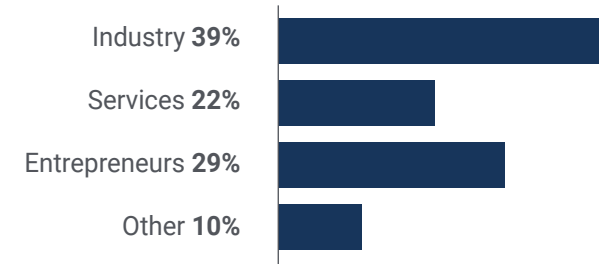
Years of Experience



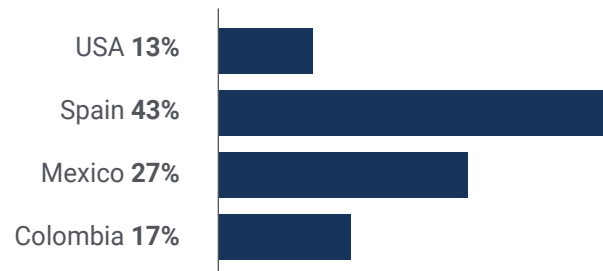
Training



Educational Profile



Geographical Distribution



Georgina Rodríguez

Senior Engineer and Big Data Project Manager at a Telemedicine company

"I had never taken a program with TECH, in fact, I didn't even know this university. However, when I decided to look for a program to expand my academic resume, the best option I found was this one and, without a doubt, I can now confirm that it is a program worth investing in. Not only do you learn in a specialized way, but it gives you the keys to perfect your leadership skills and to apply them in your work environment immediately"

08

Course Management

The teaching staff of this Postgraduate Certificate is characterized, mainly, by its vast experience in the Engineering and Biotechnology sector, which will enrich the academic experience. They will not only reflect their professionalism in the development of the syllabus, but will also share it with the graduates through the Virtual Classroom forum and individualized tutorials. In addition, they have included in the program a multitude of case studies taken from their day-to-day work, so that they can work on improving their skills.



A black and white photograph showing three students (two men and one woman) looking intently at a screen. The image is partially obscured by a dark blue diagonal overlay on the right side of the page.

“

TECH offers you the possibility of requesting individualized tutoring, thanks to which you can solve your doubts and share your opinions with the teaching staff”

Management



Ms. Sirera Pérez, Ángela

- ◆ Biomedical Engineer expert in Nuclear Medicine and exoskeleton design
- ◆ Designer of specific parts for 3D printing at Technadi
- ◆ Technician in the Nuclear Medicine area of the University Clinic of Navarra
- ◆ Degree in Biomedical Engineering from the University of Navarra
- ◆ MBA and Leadership in Healthcare and Medical Technology Companies

Professors

Ms. Ruiz de la Bastida, Fátima

- ◆ Data Scientist at IQVIA
- ◆ Area Specialist, Bioinformatics Unit, Jimenez Diaz Foundation Research Institute
- ◆ Oncology Researcher at the La Paz University Hospital
- ◆ Graduate in Biotechnology, University of Cadiz
- ◆ Master's Degree in Bioinformatics and Computational Biology, Autonomous University of Madrid
- ◆ Specialist in Artificial Intelligence and Data Analysis at the University of Chicago



09

Impact on Your Career

Given the exhaustiveness with which this program has been designed, the graduate who accesses it will obtain, with total guarantee, the most up-to-date theoretical and practical knowledge, being able to delve into the business strategies that are currently obtaining the best results. Thanks to this, they will be able to become highly qualified professionals to take on the responsibility of any project related to Big Data and Biomedicine.



“

A program that will increase your chances of climbing the career ladder and accessing job offers in prestigious companies in the Biomedicine and Big Data sector”

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

The Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data at TECH Global University is an intensive program that prepares you to face challenges and business decisions in the field of Engineering and Biomedicine. The main objective is to promote your personal and professional growth. Helping you achieve success.

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

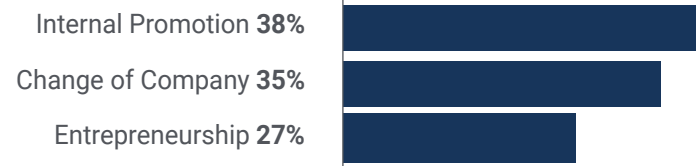
You will work on improving your leadership skills, as well as your work skills, to become a reference manager in your sector.

Successfully completing this program will increase your chances of not only a promotion, but also a significant salary increase.

Time of Change



Type of Change



Salary Increase

The completion of this program represents a salary increase of more than **28%** for our students.



10

Benefits for Your Company

The exhaustive design of this Postgraduate Certificate allows TECH to guarantee the successful education of highly qualified leaders, graduates who, after 6 weeks, are perfectly prepared to take on the management of large projects. With programs like this one, the student will work not only in the acquisition of the most specialized knowledge, but also in the resolution of complex solutions, so that they can successfully develop in any context.



“

By choosing TECH you will be accessing an international educational community, in which you will be able to network with potential partners, customers and suppliers from all over the world”

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

01

Growth of talent and intellectual capital

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

02

Retaining high-potential executives to avoid talent drain

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

03

Building agents of change

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

04

Increased international expansion possibilities

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



05

Project Development

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

06

Increased competitiveness

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

11

Certificate

The Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data 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 program will allow you to obtain your **Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data** 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.

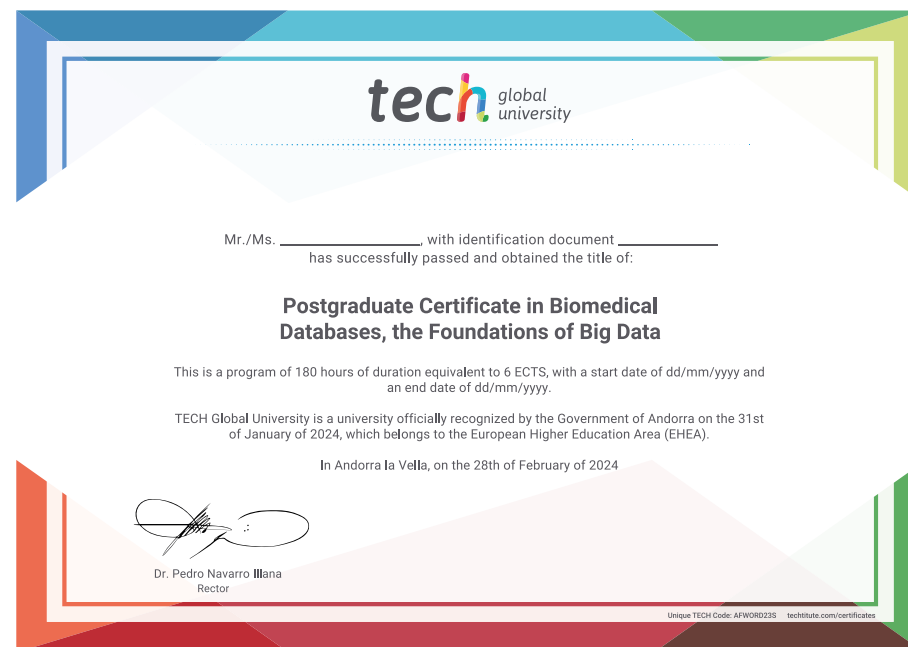
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Biomedical Databases, the Foundations of Big Data**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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