Postgraduate Certificate
Biostatistics with R

tech technological university

Postgraduate Certificate
Biostatistics with R

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

Website: **www.techtitute.com/pk/medicine/postgraduate-certificate/biostatistics-r**

Index

01
Introduction

Statistics is key in providing problem-solving input to the researcher in charge of a project. In this way, it approaches a specific sampling that provides concrete data on the research. It is a key tool in the approach to the study, the collection of information, its organization, its interpretation and the analysis related to Medicine, as in this case. Undoubtedly, the statistical system is the key to glimpse the hypotheses with robust data, which is why companies are increasingly requesting specialists who master this technique and R in Health Research. For this reason, TECH has developed a complete and rigorous degree in Biostatistics, Introduction to R and Multivariate Analysis, among many other aspects. All with the aim of updating the knowledge of professionals through 100% online, flexible and convenient teaching.

Are you looking for a degree with which, in only 150 hours, you can learn in detail the statistics applied to biomedical research with R? This Postgraduate Certificate is right for you"

In the approach to a problem from which the research project starts, Statistics also interferes. Thanks to this tool it is possible, in the first instance, to establish the type of sampling, the sample size, the type of data collection. This information will be recorded and organized, allowing you to calculate metrics and obtain reliable results. In addition, the statistical range will be fundamental in the relationship of the variables, which will provide further advances in the research.

Given the magnitude of the scope and specificities of the diseases globally, companies are calling on specialists to carry out research based on statistical data. For this reason, TECH has asked its team of experts to create a degree that allows these professionals to learn in detail the latest developments related to Biostatistics. Thus arises this Postgraduate Certificate; a complete and rigorous program that will make learning a multidisciplinary qualification of specialists, bringing them up to date with the statistical techniques of Data Mining with R and its application in Medicine.

In addition, TECH has compacted all the information into 150 hours of theoretical, practical and additional content in various formats. These materials include detailed videos, images, research articles, supplementary readings and simulation of clinical cases, among many others. Thanks to this and to the universal accessibility of TECH, being a 100% online degree, students will be able to access the syllabus at any time and place with just an electronic device and internet connection.

This **Postgraduate Certificate in Biostatistics with R** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of case studies presented by experts in Medical Research
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Do you want to learn about the main concepts of Biostatistics and the new successful application tools? Thanks to TECH and its 100% online degree you will be able to achieve it"

"You will not be alone, you will be accompanied by a team of experts versed in medical research with whom you will be able to debate and from whom you will obtain reliable advice on the real development of the profession"

Be part of the cutting-edge professionals at the forefront of scientific trials with Statistics applied to Medicine, with a program that will not limit you in other areas of your life.

A unique academic opportunity to learn more about the R program and the methods of regression and multivariate analysis.

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

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

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

02
Objectives

Given the exhaustiveness required to carry out research projects, TECH has selected a teaching team versed in the medical area that has developed the contents of this degree and aims to update the students' knowledge. In this way, the specialist will explore statistical data mining techniques. To this end, you will have not only the most innovative and cutting-edge information, but also the best tools to obtain from this academic experience a highly gratifying result for your professional performance.

The best program to get you up to date in the most used statistical techniques in biomedical research through a 100% online degree"

General Objectives

- Understand the appropriate approach to a question or problem to be solved
- Asses the state of the art of the problem through literature search
- Assess the feasibility of the potential project
- Study the drafting of a project in accordance with the different calls for proposals
- Examine the search for funding
- Master the necessary data analysis tools
- Write scientific articles (papers) for the daily magazines
- Generate posters relevant to the topics addressed
- Know the tools for dissemination to the non-specialized public
- Delve into data protection
- Understand the transfer of knowledge generated to industry or the clinic
- Examine the current use of artificial intelligence and massive data analysis
- Study examples of successful projects
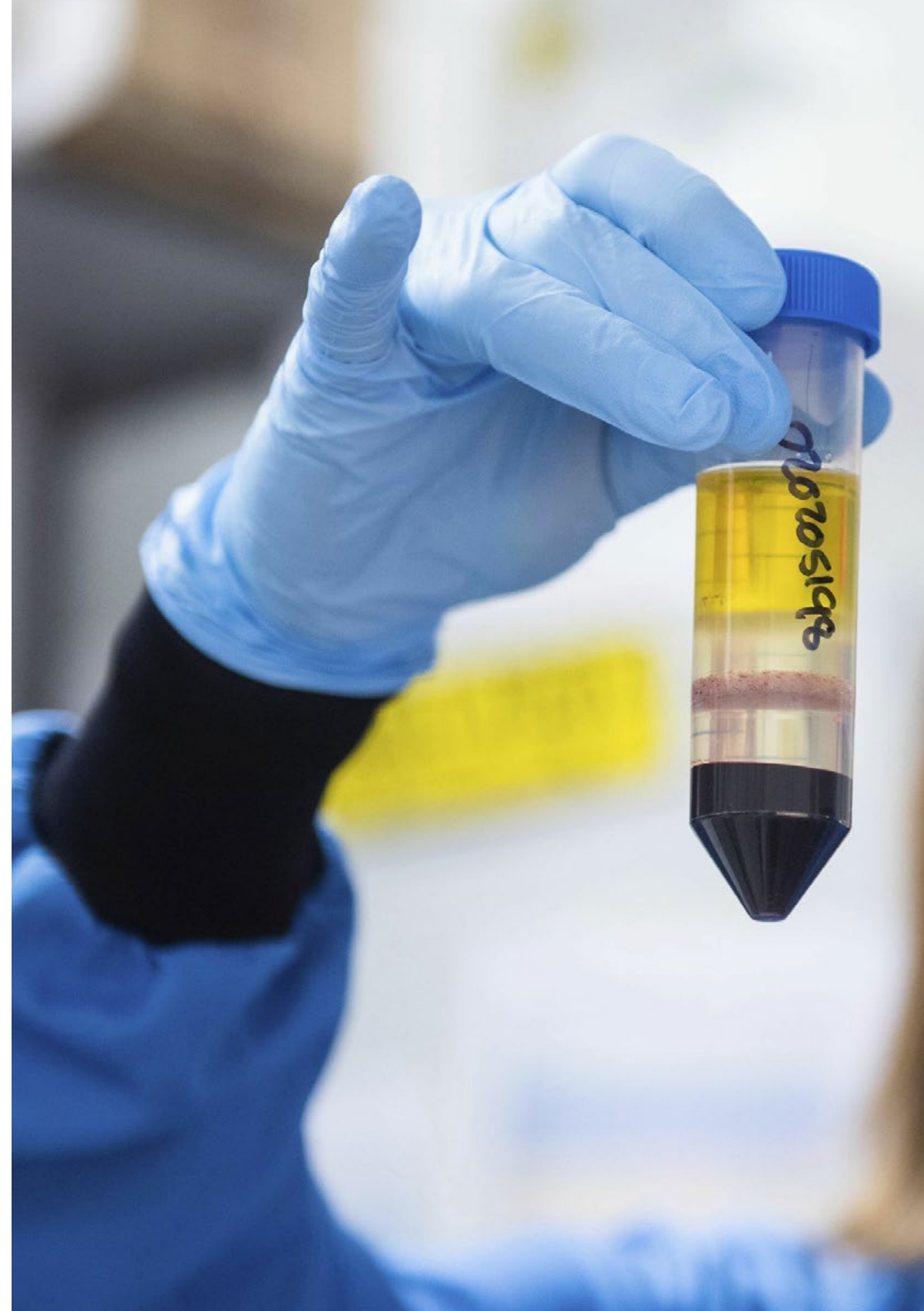
Specific Objectives

- ◆ Describe the main concepts of biostatistics
- ◆ Learn how to use the R program
- ◆ Define and understand the regression method and multivariate analysis with R
- ◆ Explore regression methods applied to research
- ◆ Recognize the concepts of statistics applied to research
- ◆ Describe the statistical techniques of data mining
- ◆ Provide knowledge of the most commonly used statistical techniques in biomedical research

If your objectives include mastering Statistics and R in Health Research, with this Postgraduate Certificate you will achieve it in less than 6 weeks"

03

Course Management

In the search for quality and rigor in its programs, TECH has turned to an expert teaching team in Medical Research to instruct students in Biostatistics with R. This is a group of experts with years of experience in the development of research work that not only have poured their theoretical knowledge into the syllabus, but also transmit to their students the keys to professional practice. This is a unique opportunity for doctors and other professionals in the healthcare field to be updated by true experts in the field and to learn in detail about the latest developments in the field in a dynamic and intensive way.

Don't wait any longer, with TECH you will have at your disposal the most personalized academic attention through the Online Campus where you will be able to discuss and solve all your doubts with the teachers"

Management

Dr. López-Collazo, Eduardo

- Scientific Deputy Director in the Institute for Health Research the Health Research Institute of La Paz University Hospital
- Head of the Department of Inmune Response and Infectious Diseases at IdiPAZ
- Head of the Department of Inmune Response, Tumors and Immunology at IdiPAZ
- President of the IdiPAZ Research Commission
- Sponsor of the External Scientific Committee of the Murcian Institute of Health Research
- Member of the Scientific Commission of FIDE
- Editor of the international scientific journal Mediators of Inflammation
- Editor of the international scientific journal "Frontiers of Immunology
- Coordinator of IdiPAZ Platforms
- Coordinator of Health Research Funds in the areas of Cancer, Infectious Diseases and HIV
- PhD in Nuclear Physics, University of La Habana
- Doctorate in Pharmacy from the Complutense University of Madrid
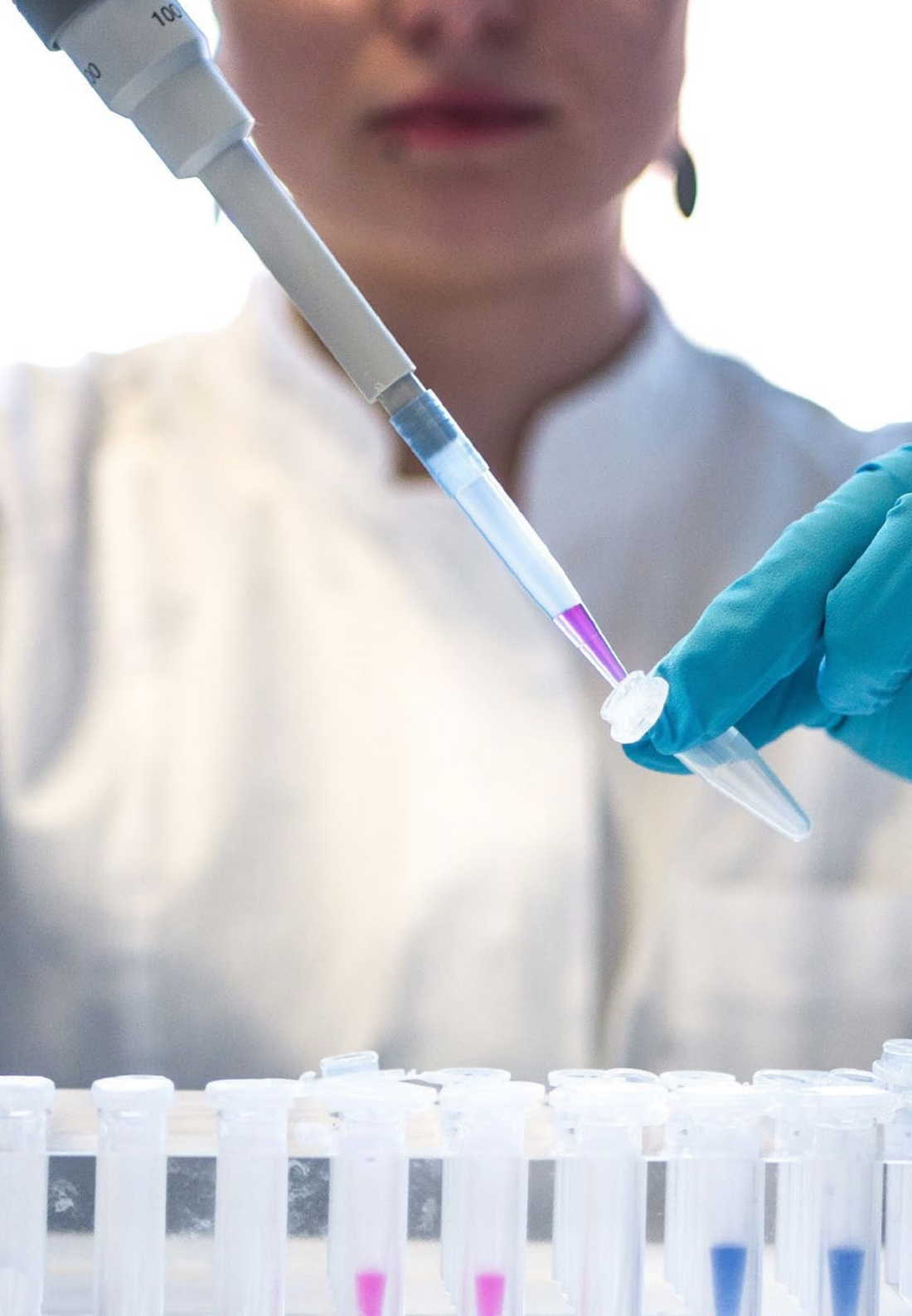
Professors

Mr. Arnedo Abad, Luis

- ◆ Data & Analyst Manager
- ◆ Data Scientist & Analyst Manager in Industrias Arnedo
- ◆ Data & Analyst Manager in Boustique Perfumes
- ◆ Data Scientist & Analyst Manager in Darecod
- ◆ Postgraduate Certificate in Statistics
- ◆ Psychology Graduate

" The leading professionals in the field have come together to offer you the most comprehensive knowledge in this field, so that you can develop with total guarantees of success"

04
Structure and Content

The professional who accesses this University Course will find 150 hours of theoretical, practical and additional content presented in different formats: detailed videos, graphic images, research articles and complementary readings, among many others. In short, everything the specialist needs to get up to date in Statistics and R in Health Research in a guaranteed way and 100% online, from any device with internet connection and with a schedule fully adapted to their availability.

Enjoy all the contents that energize this degree and that will make you get the most out of your learning by also applying it in your daily practice"

Module 1. Statistics and R in Health Research

05

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"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

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 evaluate 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.

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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.

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.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

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.

Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.

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".

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.

20%

15%

15%

3%

20%

17%

7%

3%

Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

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.

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in 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.

Certificate

The Postgraduate Certificate in Biostatistics with R guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in Biostatistics with R** contains the most complete and up-to-date scientific program on the market.

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

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Biostatistics with R**

Official Nº of Hours: **150 h.**

tech technological university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE CERTIFICATE
in

Biostatistics with R

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

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

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