Postgraduate Certificate
Biostatistics with R

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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/us/pharmacy/postgraduate-certificate/biostatistics-r**

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01
Introduction

Statistics is sometimes the solution to emerging problems in medical research processes. This tool provides specific data to clinical trials that previously could not be tested. Statistics has gained prominence because of this issue and because of the facilities it provides in the evaluation of hypotheses using robust data. For this reason, scientists working in the area of Pharmacological Research must also have intensive instruction in the application of Biostatistics with R. TECH responds to this need for qualification, with a 100% online program that delves into the methods of regression with R and applied statistics. A degree that is offered digitally in order to adapt it to the technological context and also to the personal and professional needs of the enrolled specialists.

"

With the study of this Postgraduate Certificate you will deepen in just 150 hours in statistics applied to biomedical research with R to perfect your professional skills"

Statistics can provide a glimpse of the obstacles that arise during the development of research. It does this through data and the prevention of avoidable problems. This tool allows, in the first instance, to establish the type of sampling, the sample size and the type of data collection, among other advantages. In this way, the information would be preserved and would provide full details to specialists who wanted to further investigate on a study basis.

This Postgraduate Certificate in Biostatistics with R is designed for graduates in Pharmacy and other Health Sciences who wish to deepen their knowledge in the study of statistical data. To achieve this, this degree explores the statistical techniques of Data Mining with R and its application in the pharmaceutical industry, among other issues. In addition, TECH has an experienced teaching team in the area that has reliable knowledge to transmit all the contents of the subject. All this, in order to expand and update the research knowledge of healthcare professionals, through strategic tools.

This is a university degree taught in a 100% online format, which allows students to comprehensively delve into trends and new theories of regression methods with R. All this, thanks to theoretical-practical and additional materials that can be downloaded so that students can have the reference guide, even offline, once it has been stored on their electronic device. In addition, the innovative pedagogical system, based on the Relearning methodology, relieves specialists of long hours of memorization and allows them to adapt the pace of study according to their personal and professional needs.

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
- The availability of access to content from any fixed or portable device with an Internet connection

" *Do you wish to improve your professional skills in order to apply them to your pharmacological research project? Now you can get it thanks to TECH and its 100% online degree"*

"

By taking this program you will not have to do without other areas of your life TECH adapts to you and your needs with a 100% online degree suitable for an active working life"

Apply multivariate analysis and new scientific methods associated with Statistics to drive the development of your own and your collaborating trials.

Delve into the R program and regression methods and become part of the group of experts at the forefront of pharmacological research.

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

The main objective of this Postgraduate Certificate in Biostatistics with R is to offer students the most updated content on statistical data mining techniques. In addition, the didactic and innovative material offered by TECH brings students directly and quickly to the knowledge of statistics applied to research. All this, together with a specialized teaching team with whom you will be able to discuss through a direct communication channel, so that the specialists of the future can improve their skills and promote their professional projects.

Data mining is one of the key techniques in the application of Statistics in scientific projects. Discover its benefits in your own projects thanks to the knowledge offered by TECH"

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

◆ 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

Boost not only your career, but also advances in Biomedicine with Statistics and R in Health Research in just 6 weeks"

03
Course Management

TECH has called on 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, who have not only poured their theoretical knowledge into the syllabus, but will also adapt to each case among the students, to give clues in the practical performance in the pharmacological area. It is, therefore, a unique opportunity for Pharmacy graduates and other professionals in the health branch, to get up to date with real experts in the area and to learn in detail the latest developments in the field in a dynamic and intensive way.
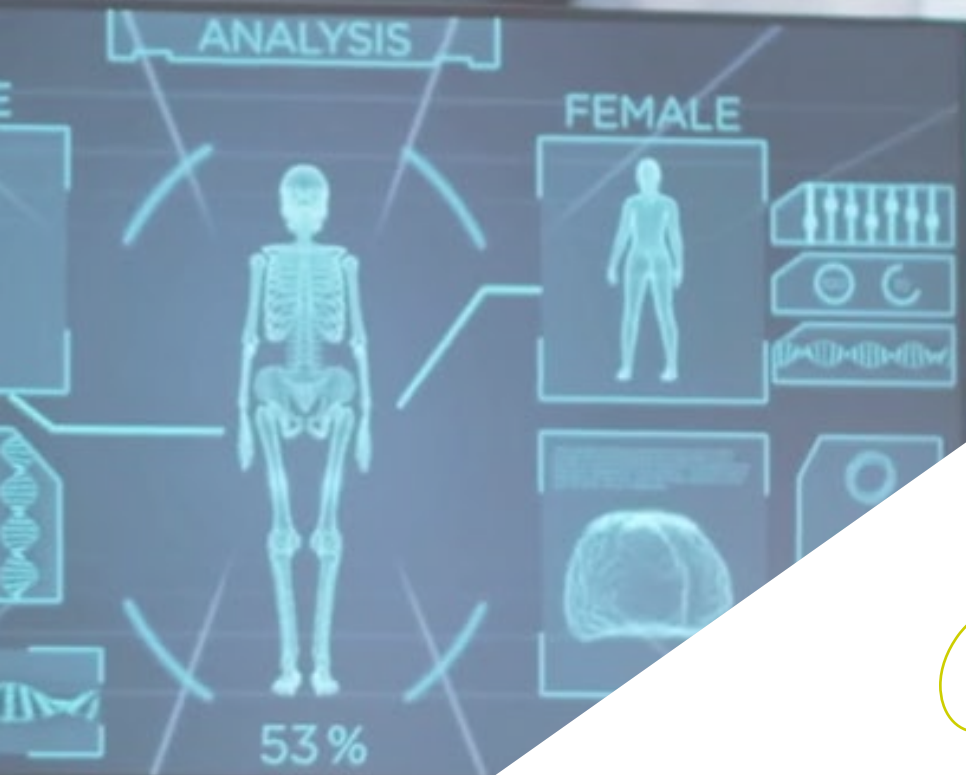
Are you ready to be updated by the best professionals working on Medical Research? Don't wait any longer, with TECH you will have at your disposal the most personalized academic attention you need"

Management

Dr. López-Collazo, Eduardo

- Deputy Scientific Director at the Healthcare Research Institute of the 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 materials contained in this Postgraduate Certificate have been enriched with the guidelines of the specialists to offer the best professional guarantee for the instruction of the students. In addition, the Relearning methodology has been applied, so that Pharmacy graduates do not invest long hours of memorization and can easily assimilate the contents. In this way, the program will teach students about the intricacies of Statistics and R in Health Research. In this sense, TECH aims to enlighten the professionals of the sector, with a practical character, towards the scenarios in which they will develop or are already developing as specialists.

Learn about the most common statistical techniques in Pharmacological Research and enjoy all the contents that make this degree program dynamic so that you can get the most out of it"

Module 1. Statistics and R in Health Research

A degree designed for professionals like you, who want to improve the quality of their work and, therefore, the quality of their scientific results"

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 be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly 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, attempting to recreate the actual conditions in a pharmacist'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. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their 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.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.

Pharmacists will learn through real cases and by solving 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 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic 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.

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 created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.

Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.

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 unique multimedia content presentation training system 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%
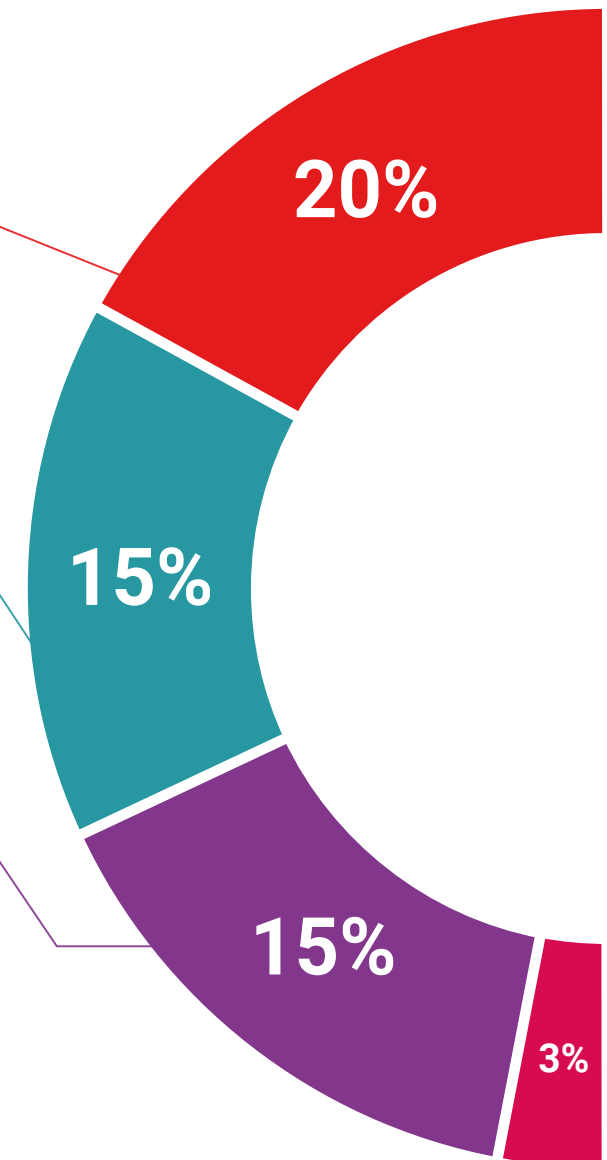
Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through 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.

06
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 diploma 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.**

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Awards the following

DIPLOMA
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

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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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