Postgraduate Certificate

Multivariate II

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Postgraduate Certificate
Multivariate II

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

Website: **www.techtitute.com/pk/engineering/postgraduate-certificate/multivariante-ll**

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01

Introduction

Acquiring knowledge and skills in Multivariate is essential for an engineer because it provides the necessary tools to analyze complex data, discover important relationships between variables and make informed decisions based on the information obtained. For this reason, TECH has designed a program that allows students to maximize their knowledge on aspects such as Gamma Coefficients, The General Saturated Model or the Partial Association Test, among others. All this, thanks to a 100% online format and with the most dynamic and practical multimedia materials available in the academic market.

Improve your skills on the Ordinal Scale, Nominal Scale or Saturated Model, thanks to the largest digital university in the world, thanks to TECH"

The ability to manage the multivariate domain is important for an engineer due to the large amount of data that is generated in complex projects. Multivariate offers techniques for modeling and analyzing this data, allowing the engineer to obtain valuable insights into the behavior of the system in question.

For this reason, TECH has designed a Postgraduate Certificate in Multivariate II with which it seeks to provide students with the necessary skills to be able to perform their work as specialists, with the highest possible efficiency and quality. Therefore, throughout this program, aspects such as Problem Formulation in Loglinear Models, the Hierarchical Model or Binary Logistic Regression will be addressed.

All this, through a convenient 100% online format that allows students to organize their schedules and studies, combining them with their other daily work and interests. In addition, this program has the most complete theoretical and practical materials on the market, which facilitates the student's study process and allows them to achieve their objectives quickly and efficiently.

This **Postgraduate Certificate in Multivariate II** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts in Multivariate
- The graphic, schematic and eminently practical contents with which it is conceived provide sporting and practical information on those disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out 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

Become an expert in Multivariate Engineering in just 6 weeks and with total freedom to organize your schedule or studies”

Enhance your professional profile and achieve success in one of the most promising areas in the field of Engineering, thanks to TECH and the most innovative materials in the academic market"

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

The 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 immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

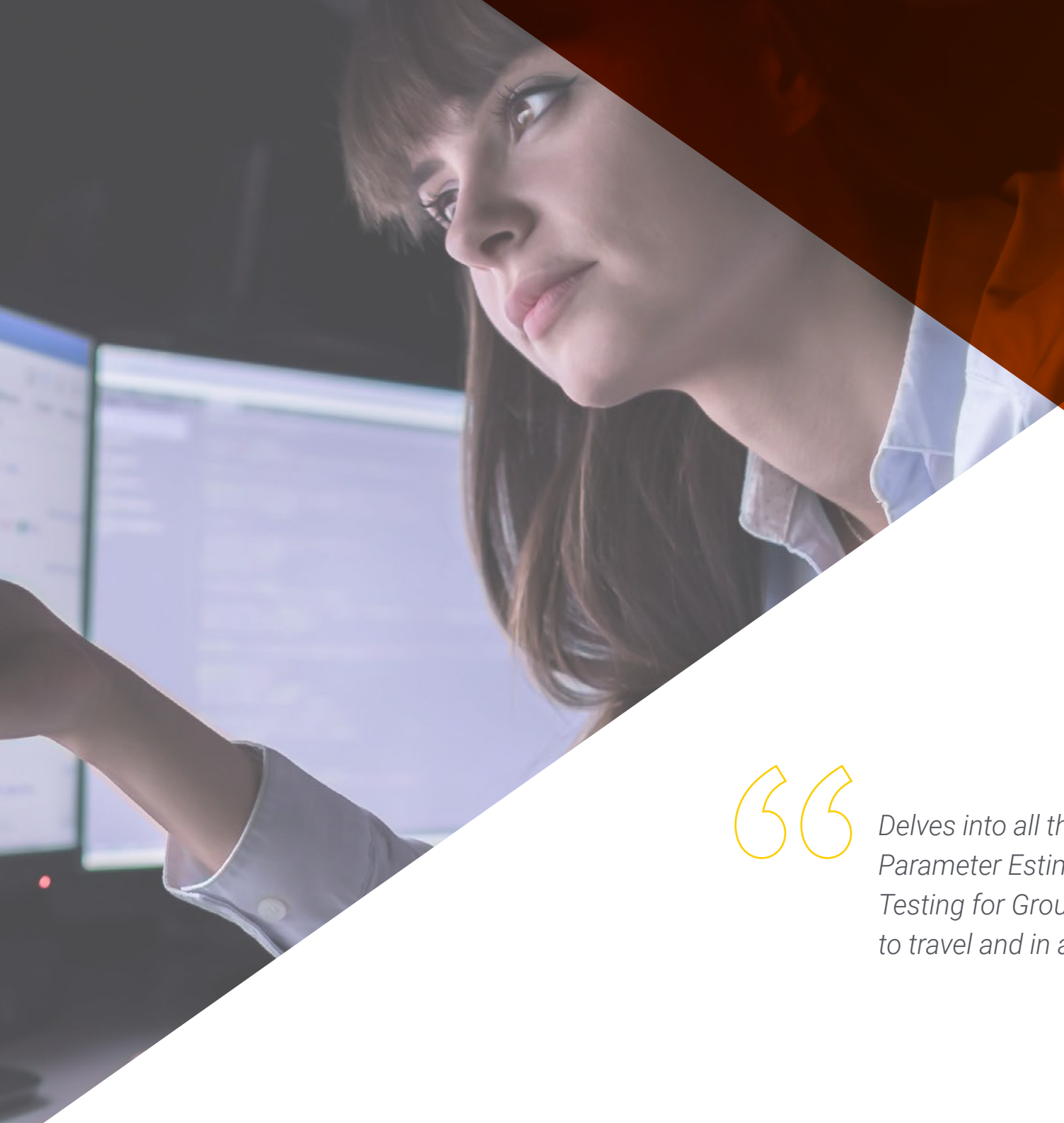
Access all the content on Probit Response Models from any device with an Internet connection.

Acquire in-depth knowledge about Hierarchical Modeling or Binary Logistic Regression, from the comfort of your home and at any time of the day.

02

Objectives

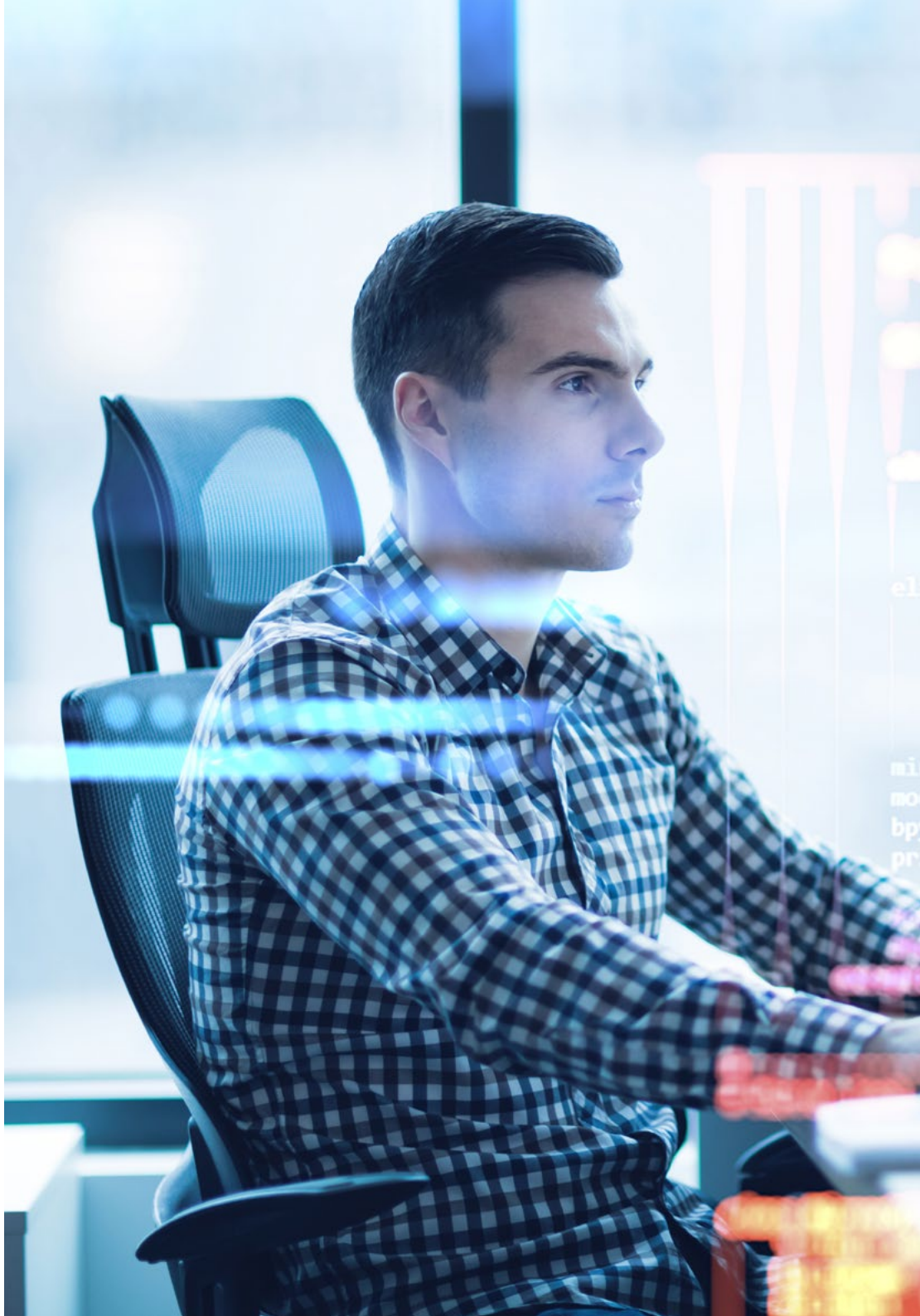
The objective of this Postgraduate Certificate in Multivariate II is that the student acquires a precise up-to-date of their skills and knowledge in this area. An up-to-date approach that will allow the student to work with the highest quality and efficiency in their work. All this, thanks to TECH and a 100% online modality that gives total freedom of organization and schedules to the student.

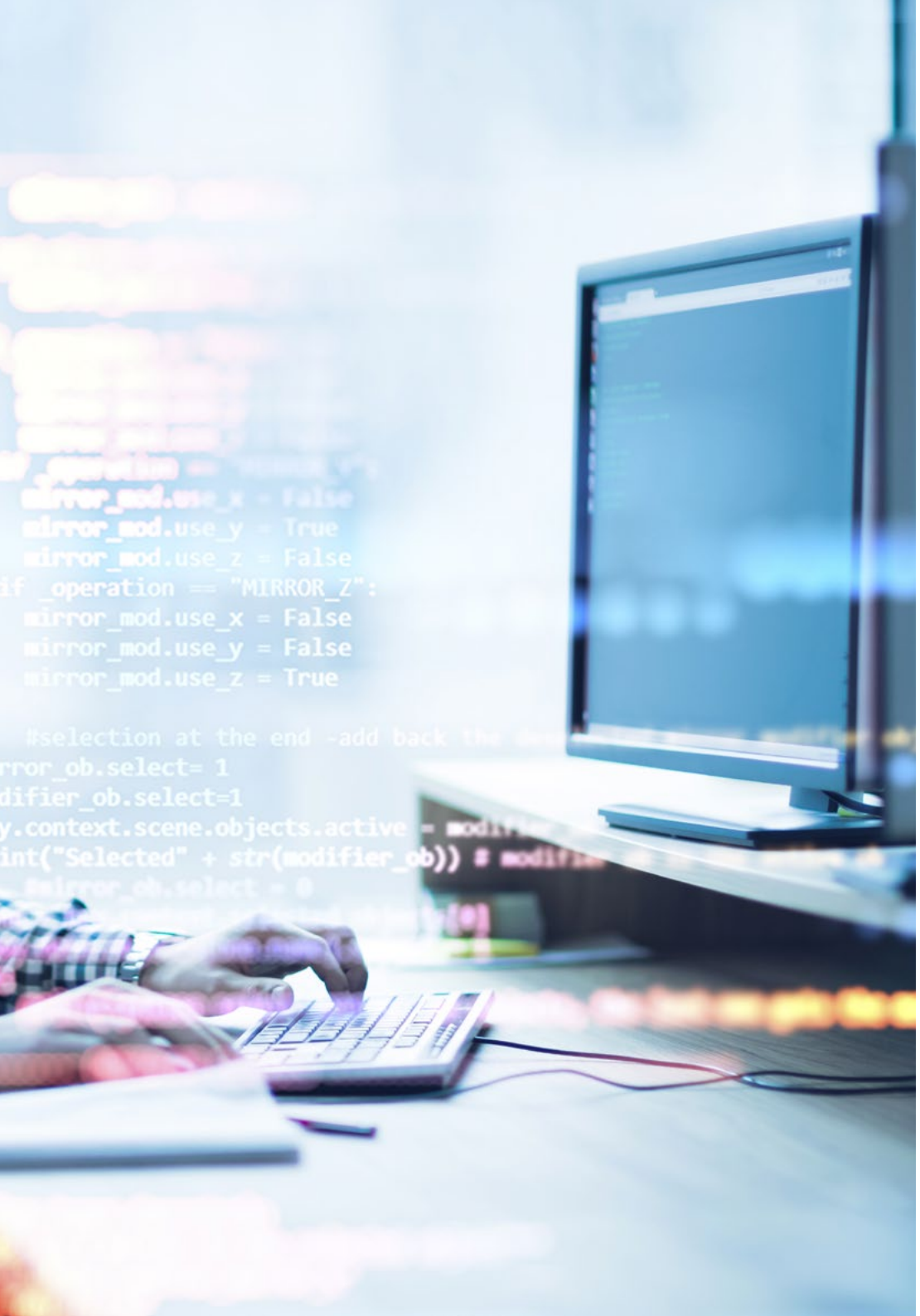


Delves into all the essential aspects of Parameter Estimation or Parallelism Testing for Groups, without the need to travel and in a 100% online format"

General Objectives

- Apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the development and defense of arguments and problem solving within their area of study
- Perform basic operations related to information debugging
- Use the appropriate sources of information for each type of applied study
- Describe the main sources of aggregate output growth of an economy in the long run
- Calculate and use elasticities and cost-of-living indexes





Specific Objectives

- Acquire the conceptual and practical fundamentals to conduct multivariate qualitative data analysis
- Apply specific software to solve each of these problems

Exceed your highest expectations, thanks to a unique program with the most complete theoretical and practical materials on Multivariate analysis in the academic market"

03

Structure and Content

The structure and teaching materials of this program have been designed by the renowned professionals that are part of TECH's team of experts in this area of engineering. These specialists have used their extensive experience and their most advanced knowledge to create practical and completely up-to-date contents. All this, based on the most efficient teaching methodology, TECH's Relearning.

Enroll now and specialize in Nominal, Ordinal or Interval Scale, without time limits and 24 hours a day"

Module 1. Multivariate Statistical Techniques

1.1. Introduction
1.2. Nominal Scale
  1.2.1. Measures of Association for 2x2 Tables
    1.2.1.1. Phi Coefficient
    1.2.1.2. Relative Risk
    1.2.1.3. Cross-Product Ratio (Odds Ratio)
  1.2.2. Measures of Association for IxJ Tables
    1.2.2.1. Contingency Ratio
    1.2.2.2. Cramer's V
    1.2.2.3. Lambdas
    1.2.2.4. Tau of Goodman and Kruskal
    1.2.2.5. Uncertainty Coefficient
  1.2.3. Kappa Coefficient
1.3. Ordinal Scale
  1.3.1. Gamma Coefficients
  1.3.2. Kendall's Tau-B and Tau-C
  1.3.3. Sommers' D
1.4. Interval or Ratio Scale
  1.4.1. Eta Coefficient
  1.4.2. Pearson's and Spearman's Correlation Coefficients
1.5. Stratified Analysis in 2x2 Tables
  1.5.1. Stratified Analysis
  1.5.2. Stratified Analysis in 2x2 Tables
1.6. Problem Formulation in Log-linear Models
  1.6.1. The Saturated Model for Two Variables
  1.6.2. The General Saturated Model
  1.6.3. Other Types of Models

1.7. The Saturated Model
- 1.7.1. Calculation of Effects
- 1.7.2. Goodness of Fit
- 1.7.3. Test of K effects
- 1.7.4. Partial Association Test

1.8. The Hierarchical Model
- 1.8.1. The Backward Method

1.9. Probit Response Models
- 1.9.1. Problem Formulation
- 1.9.2. Parameter Estimation
- 1.9.3. Chi-Square Goodness-of-Fit Test
- 1.9.4. Parallelism Test for Groups
- 1.9.5. Estimation of the Dose Required to Obtain a Given Response Ratio

1.10. Binary Logistic Regression
- 1.10.1. Problem Formulation
- 1.10.2. Qualitative Variables in Logistic Regression
- 1.10.3. Selection of Variables
- 1.10.4. Parameter Estimation
- 1.10.5. Goodness of Fit
- 1.10.6. Classification of Individuals
- 1.10.7. Prediction

Thanks to the most efficient teaching methodology, TECH Relearning, you will be able to acquire new knowledge in a precise and natural way, without spending too much time studying"

04

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"

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"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. 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 professional reality is taken into account.

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

The case method is the most widely used learning system in the best faculties in the world. 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 that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

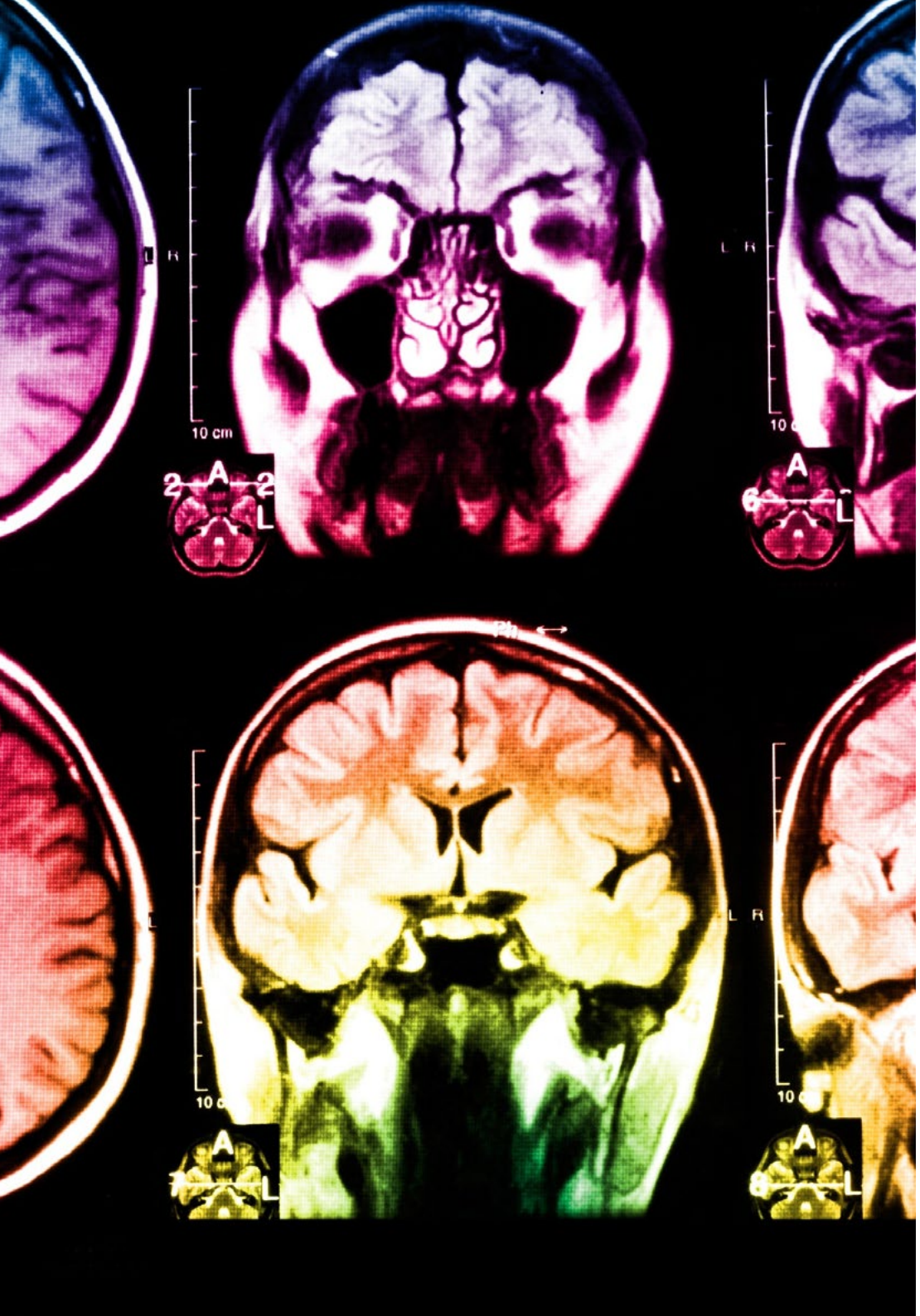
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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

In 2019, we obtained the best learning results of all online universities in the world.

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 university is the only one in the world authorized to employ 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. This methodology has 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, and financial markets and 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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.

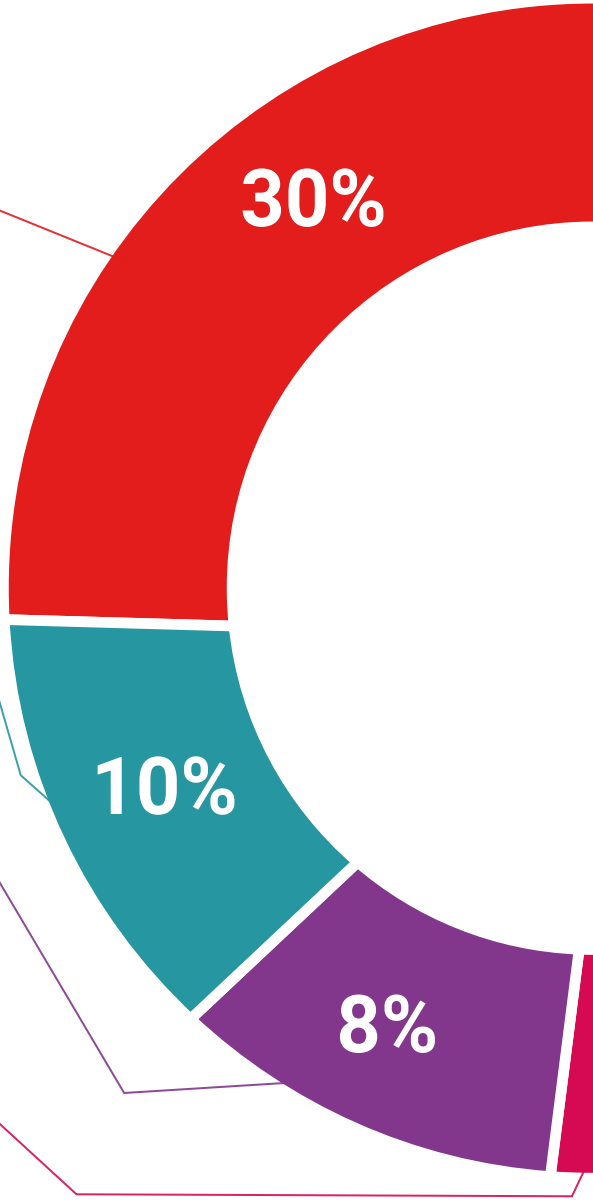
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

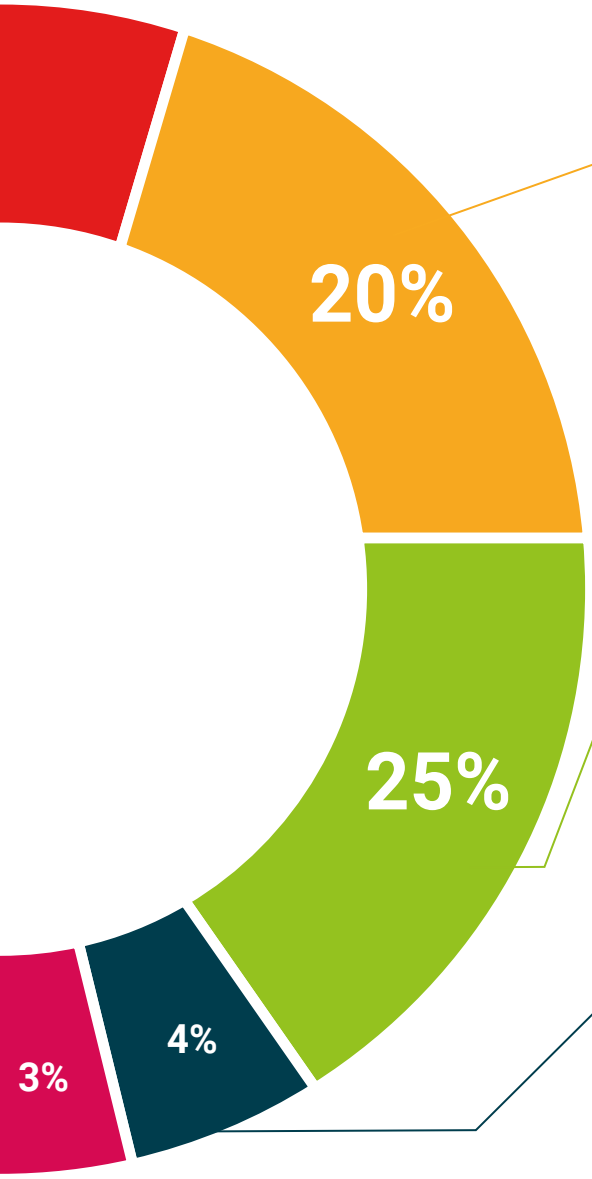
Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

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 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.

05

Certificate

The Postgraduate Certificate in Multivariate II 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 Multivariate II** contains the most complete and up-to-date 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 Multivariate II**

Official Nº of Hours: **150 h.**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Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Multivariate II

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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