Postgraduate Diploma
Nutrigenetics

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Postgraduate Diploma
Nutrigenetics

Course Modality: **Online**
Duration: **6 months.**
Certificate: **TECH Technological University**
18 ECTS Credits
Teaching Hours: **450 hours.**
Website: **www.techtitute.com/nutrition/postgraduate-diploma/postgraduate-diploma-nutrigenetics**

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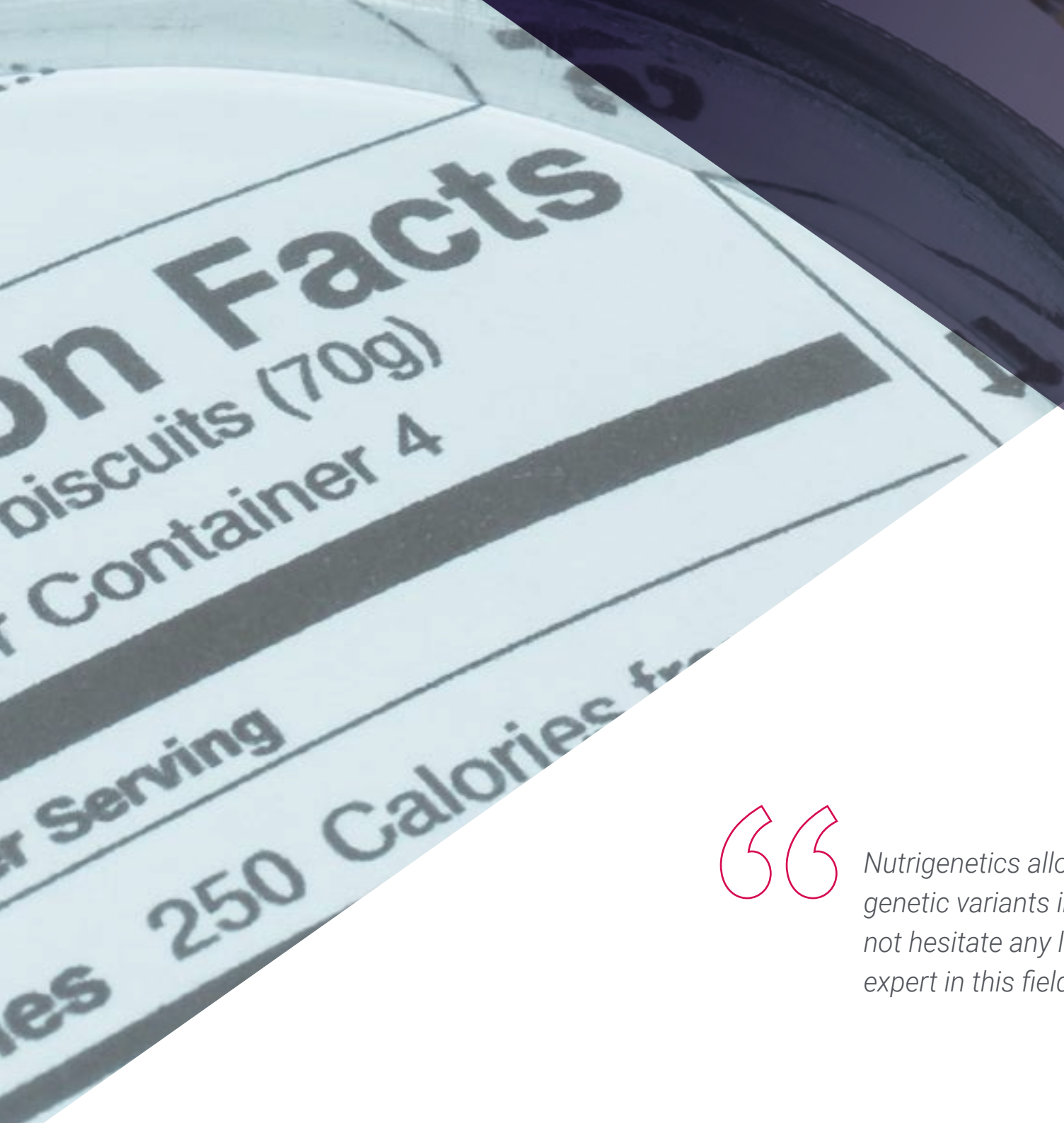
01

Introduction

Nutrigenetics has brought about a complete revolution in the field of nutrition. It has the ability to individually associate treatments and interventions to each personal circumstance. The professional in this area needs to be fully trained in this field in order to be able to introduce all its advances in his daily practice. TECH offers you a simple and efficient way to achieve this. Update your knowledge with the best Postgraduate Diploma in the current educational market and become an expert in this revolutionary field of work.



Nutrigenetics allows us to understand how genetic variants influence metabolism. Do not hesitate any longer and become an expert in this field"

This Postgraduate Diploma details everything a health professional needs to know about Nutritional Genomics and Precision Nutrition, taking into account aspects related to Nutrigenetics. Thus, the material is organized in such a way as to advance knowledge without leaving doubts or gaps in information. It is the best training on the market, because it offers the opportunity to learn online all the innovation in the field of Nutritional Genomics.

This Postgraduate Diploma in Nutrigenetics introduces the student to this aspect, its basis, the interaction between genetic variability and diet, and how population genetics is being applied in the field of nutrition.

In addition, the key polymorphisms that exist to date related to nutrition and human metabolic processes are presented, as well as those related to complex and chronic diseases related to nutrition and dietary habits, such as type II diabetes, hypertension, cancer, hyperlipidemia and arteriosclerosis.

The main SNPs (Single Nucleotide Polymorphisms) that the professional will be able to use in his clinical practice are also analyzed in depth and the key studies that give scientific support to these SNPs are analyzed, presenting how this tool could prevent both the appearance and the recurrence of these diseases, laying the foundations for Nutritional Genomics and Preventive Nutrition.

As it is an online Postgraduate Diploma, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Diploma in Nutrigenetics** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- The development of case studies presented by experts in Genomic and Precision Nutrition.
- The graphic, schematic, and eminently practical contents with which they are created contain information that is indispensable for professional practice.
- Practical exercises where the self-assessment process can be carried out to improve learning.
- Special emphasis on innovative methodologies in genomic and precision nutrition, focusing on aspects such as laboratory, biostatistics and the current market.
- 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.

Get trained in the broad field of Nutrigenetics and offer specialized treatments to your patients"

This Postgraduate Diploma is the best investment you can make in selecting a refresher program to update your knowledge in Nutrigenetics"

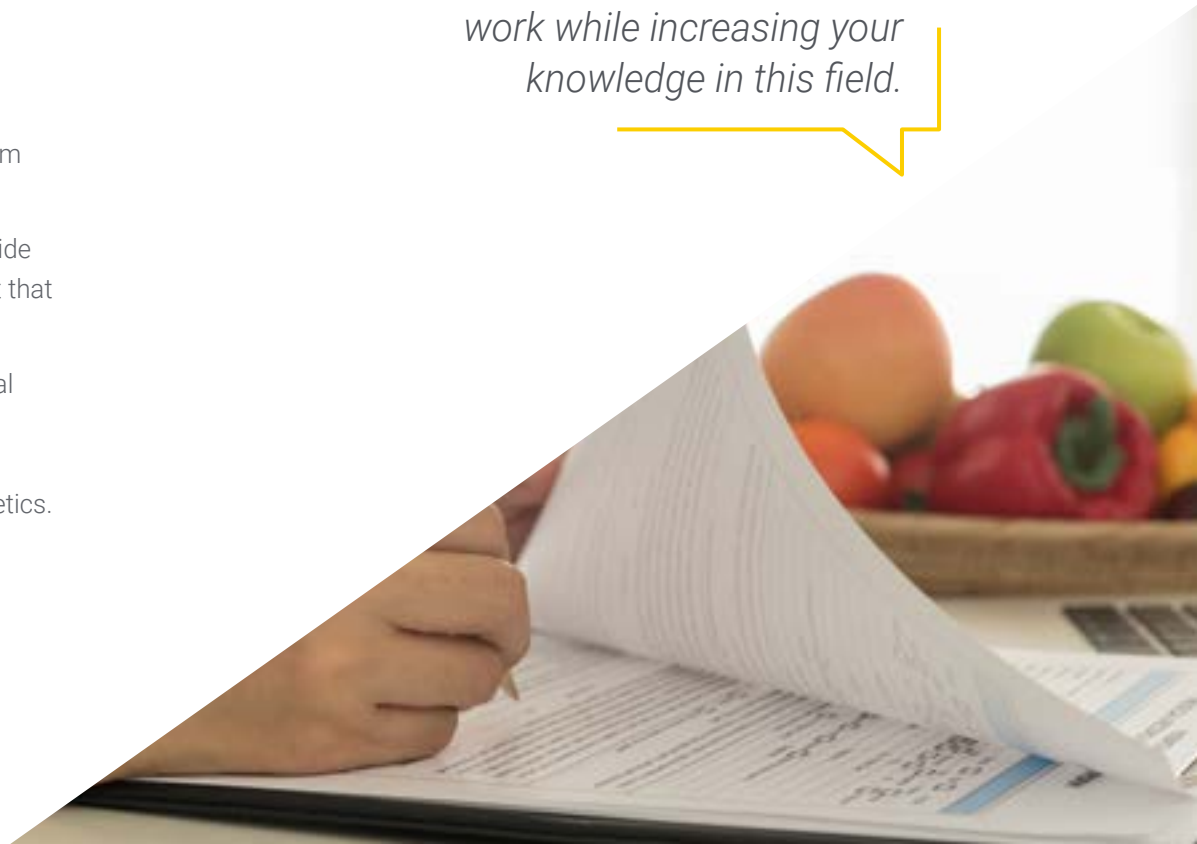
The Postgraduate Diploma allows training in simulated environments, which provide immersive learning programmed to train for real situations.

This 100% online Postgraduate Diploma will allow you to combine your studies with your professional work while increasing your knowledge in this field.

Its teaching staff includes professionals belonging to the field of nutrition, who contribute their work experience to this training, as well as renowned specialists from reference 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 training programmed to train 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 professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Nutrigenetics.



02

Objectives

The main objective of the program is the development of theoretical and practical learning, so that the nutrition professional can master in a practical and rigorous way the study of Nutrigenetics.

This refresher program will generate a sense of confidence in the performance of your daily practice, which will help you grow personally and professionally"

General Objectives

- Acquire theoretical knowledge on human population genetics.
- Acquire knowledge of Nutritional Genomics and Precision Nutrition to be able to apply it in clinical practice.
- Learn about the trajectory of this innovative field and the key studies that contributed to its development.
- Know in which pathologies and conditions of human life Nutritional Genomics and Precision Nutrition can be applied.
- Be able to assess individual response to nutrition and dietary patterns in order to promote health and disease prevention.
- Understand how nutrition influences gene expression in humans.
- Learn about new concepts and future trends in the field of Nutritional Genomics and Precision Nutrition.
- Adapt personalized dietary and lifestyle habits according to genetic polymorphisms.
- Provide health professionals with all the up-to-date knowledge in the field of Nutritional Genomics and Precision Nutrition in order to know how to apply it in their professional activity.
- Put all the up-to-date knowledge in perspective. Where we are now and where we are headed so that the student can appreciate the ethical, economic and scientific implications in the field.

Specific Objectives

Module 1. Nutrigenetics I

- Acquire the latest knowledge on population genetics.
- Know how the basis of the interaction between genetic variability and diet is generated.
- Introduce the circadian control system pointer and central and peripheral clocks.

Module 2. Nutrigenetics II - Key Polymorphisms

- Present the key polymorphisms to date related to human nutrition and metabolic processes that the professional needs to know.
- Analyze the key studies that support these polymorphisms and the debate, where it exists.

Module 3. Nutrigenetics III

- Present the key polymorphisms to date related to complex diseases that depend on nutritional habits.
- Introduce new cutting-edge concepts in Nutrigenetic research.

03

Course Management

The program's faculty includes leading experts in Genomic and Precision Nutrition, who bring their work experience to this training. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.

Leading professionals in the field have come together to teach you the latest advances in Nutrigenetics"

Management

Dr. Konstantinidou, Valentini

- D. in Biomedicine.
- Lecturer in Nutrigenetics.
- Founder of DNANUTRICOACH®.
- Dietitian-Nutritionist.
- Food Technologist.

04

Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the implications that training has on daily practice, who are aware of the relevance of current training in Genomic and Precision nutrition, and are committed to quality teaching using new educational technologies.

We have the most complete and up-to-date scientific program on the market. We strive for excellence and for you to achieve it too"

Module 1. Nutrigenetics I

1.1. Nutrigenetics Authorities and Organizations
- 1.1.1. NUGO
- 1.1.2. ISNN
- 1.1.3. Evaluation Committees

1.2. GWAS I Studies
- 1.2.1 Population Genetics - Design and Use
- 1.2.2. Hardy-Weinberg Law
- 1.2.3. Linkage Imbalance

1.3. GWAS II
- 1.3.1. Allelic and Genotypic Frequencies
- 1.3.2. Gene-Disease Association Studies
- 1.3.3. Association Models (Dominant, Recessive, Co-dominant)
- 1.3.4. Genetic Scores

1.4. The Discovery of Nutrition-Related SNPs
- 1.4.1. Key Studies-Design
- 1.4.2. Main Results

1.5. The Discovery of SNPs Associated with Nutrition-Related Diseases (Diet-Depended)
- 1.5.1. Cardiovascular Diseases.
- 1.5.2. Diabetes Mellitus Type II
- 1.5.3. Metabolic Syndrome

1.6. Main Obesity-Related GWAS
- 1.6.1. Strengths and Weaknesses
- 1.6.2. The FTO Example

1.7. Circadian Control of Intake
- 1.7.1. Gut-Brain Axis
- 1.7.2. Molecular and Neurological Basis of the Brain-Gut Connection

1.8. Chronobiology and Nutrition
- 1.8.1. Central Clock
- 1.8.2. Peripheral Clocks
- 1.8.3. Circadian Rhythm Hormones
- 1.8.4. Intake Control (Leptin and Ghrelin)

1.9. SNPs related to Circadian Rhythms
- 1.9.1. Regulatory Mechanisms of Satiety
- 1.9.2. Hormones and Intake Control
- 1.9.3. Possible Pathways Involved

Module 2. Nutrigenetics II - Key Polymorphisms

2.1. Obesity-Related SNPs
- 2.1.1. The Story of the " Obese Monkey"
- 2.1.2. Appetite Hormones
- 2.1.3. Thermogenesis

2.2. Vitamin-Related SNPs
- 2.2.1. Vitamin D
- 2.2.2. B Complex Vitamins
- 2.2.3. Vitamin E

2.3. Exercise-Related SNPs
- 2.3.1. Strength vs. Competition
- 2.3.2. Sports Performance
- 2.3.3. Injury Prevention/Recovery

2.4. Oxidative Stress/Detoxification-related SNPs
- 2.4.1. Genes Encoding Enzymes
- 2.4.2. Anti-Inflammatory Processes
- 2.4.3. Phase I+II of Detoxification

2.5. SNP related to Addictions
- 2.5.1. Caffeine
- 2.5.2. Alcohol
- 2.5.3. Salt

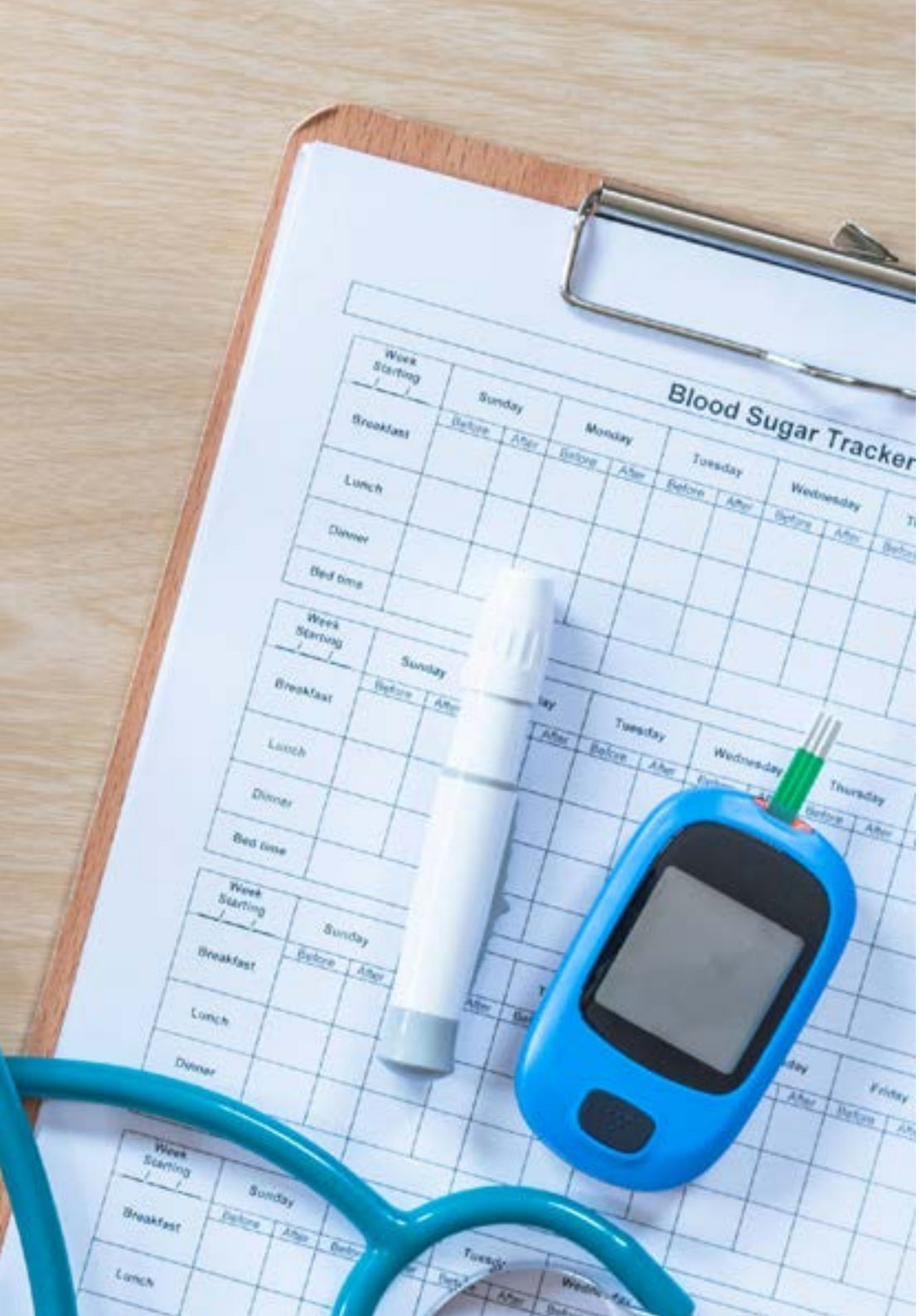
5.6. SNP related to Flavor
- 2.6.1. Sweet Taste
- 2.6.2. Salty Taste
- 2.6.3. Bitter Taste
- 2.6.4. Acid Taste

2.7. SNP vs Allergies vs Intolerances
- 2.7.1. Lactose
- 2.7.2. Gluten
- 2.7.3. Fructose

2.8. PESA Study

Module 3. Nutrigenetics III

3.1. SNPs Predisposing to Complex Nutrition-Related Diseases - Genetic Risk Scores (GRS)
3.2. Type II Diabetes
3.3. Hypertension
3.4. Arteriosclerosis
3.5. Hyperlipidemia
3.6. Cancer
3.7. The Exposome Concept
3.8. Metabolic Flexibility Concept
3.9. Current Studies-Challenges for the Future



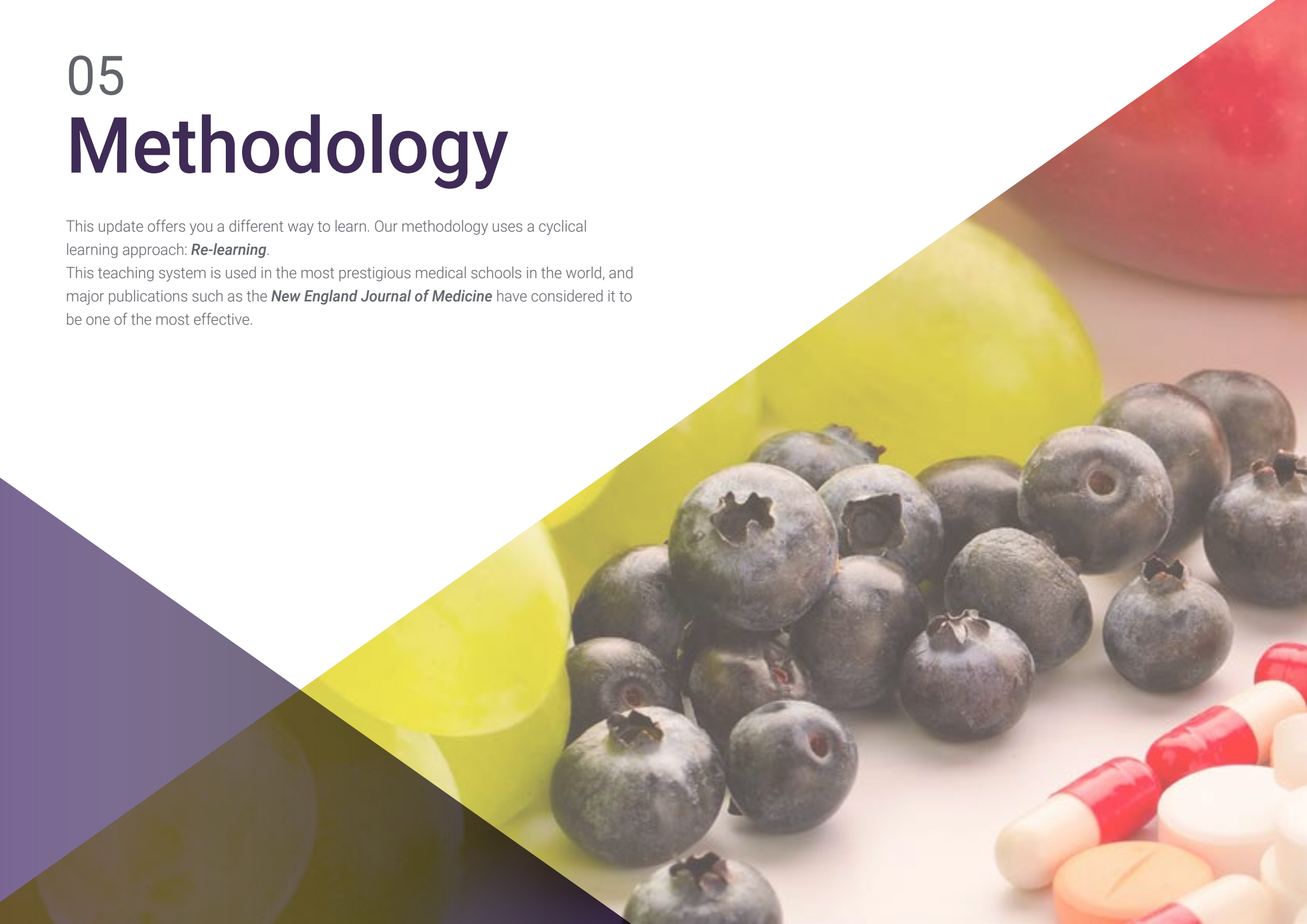
A unique, key and decisive training experience to boost your professional development"

05

Methodology

This update offers you a different way to learn. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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 Re-learning, 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

In a given clinical situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Nutritionists learn better, faster, and more sustainably over time.

With TECH, nutritionists can 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 potential 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 of professional nutritional 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:

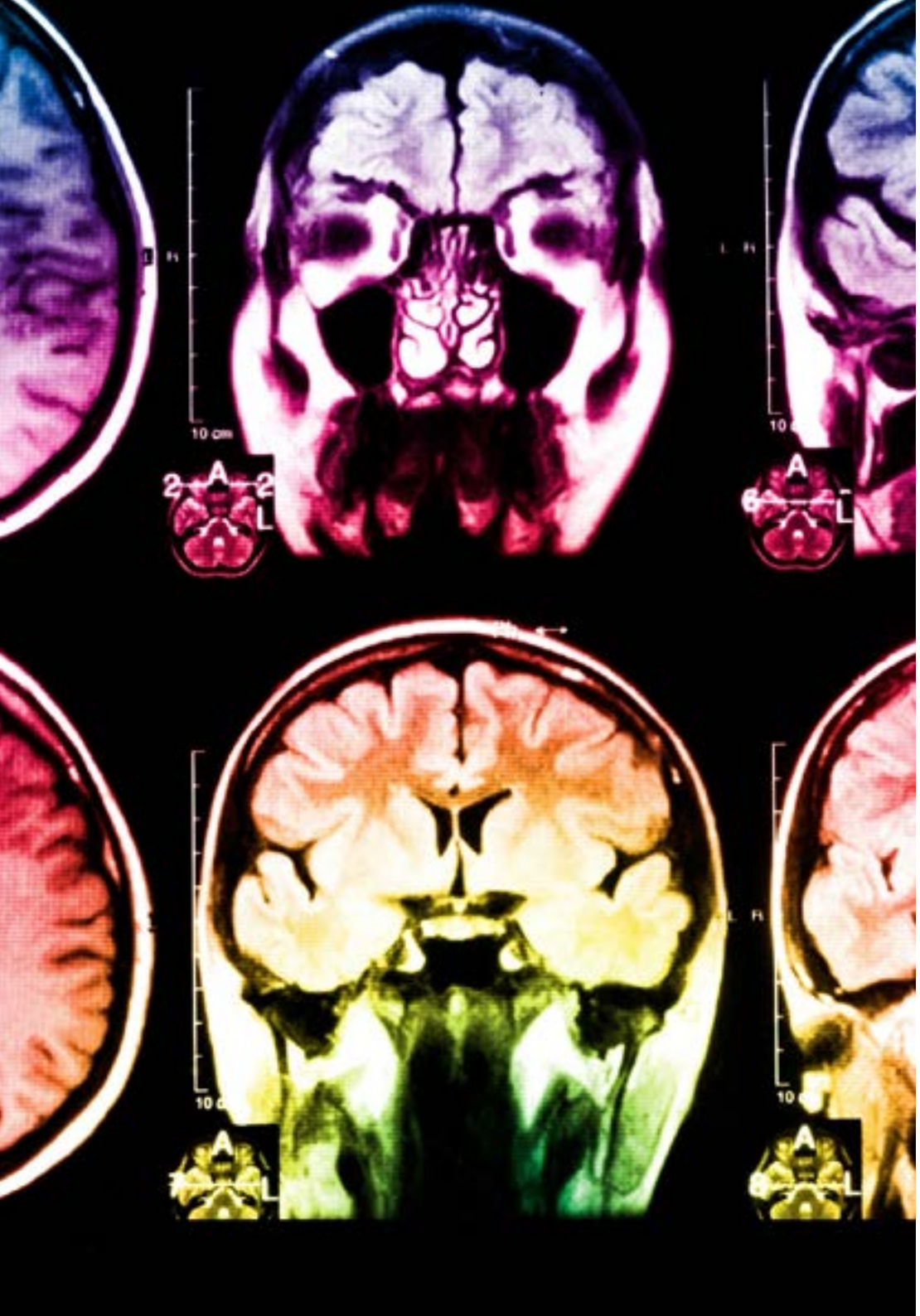
1. Nutritionists who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning is solidly focused on practical skills that allow the nutritionist to better integrate the knowledge into clinical practice.
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.

Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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.

The nutritionist 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.



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

With this methodology we have have trained more than 45,000 nutritionists with unprecedented success, in all clinical specialties regardless of the workload. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

> Re-learning 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 (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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

In this program you will have access to the best educational material, prepared with you 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 really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Nutrition Techniques and Procedures on Video

We introduce you to the latest techniques, the latest educational advances, and the forefront of current nutritional procedures and techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.

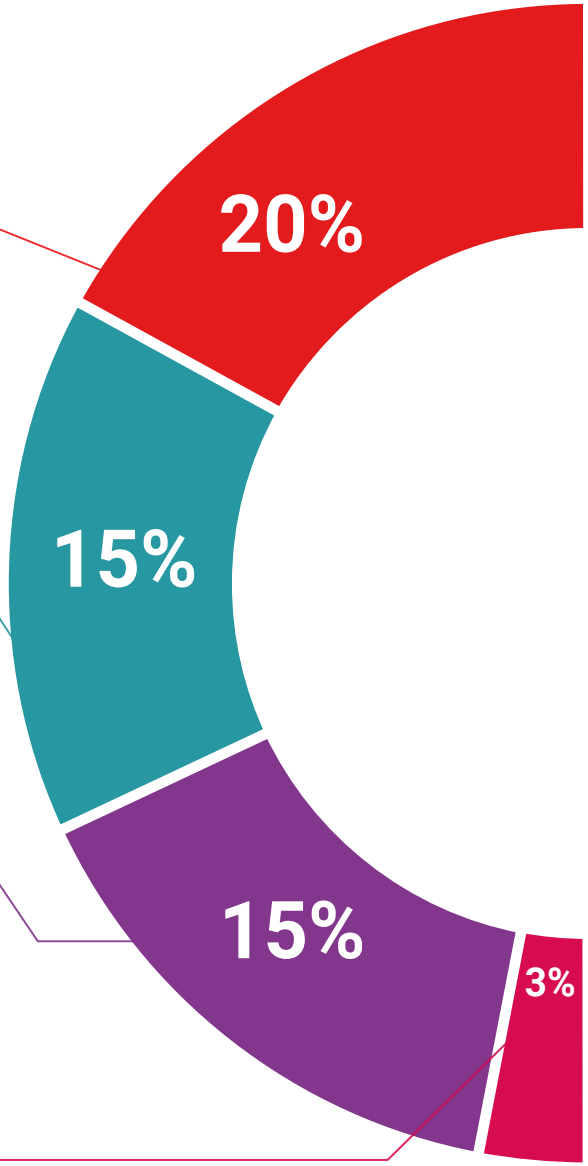
Interactive Summaries

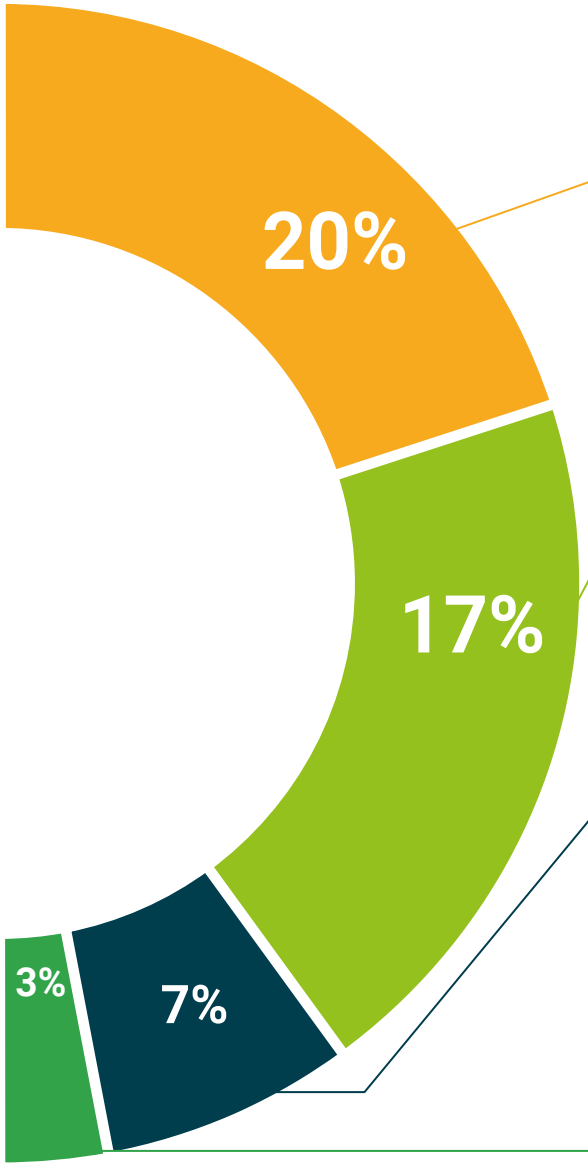
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique upgrade system for the presentation of multimedia content was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents, international guides... in our virtual library you will have access to everything you need to complete your specialization.





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 & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.

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 our future difficult decisions.

Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.

06

Certificate

The **Postgraduate Diploma in Nutrigenetics** guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Diploma certificate issued by **TECH Technological University.**

Successfully complete this training and receive your university diploma without travel or laborious paperwork"

This **Postgraduate Diploma in Nutrigenetics** 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 Diploma certificate** 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 Nutrigenetics**

ECTS: **18**

Official Number of Hours: **450**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Awards the following

DIPLOMA

to

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

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Nutrigenetics

This is a qualification awarded by this University, with 18 ECTS credits and equivalent to 450 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 diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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Postgraduate Diploma
Nutrigenetics

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