

Postgraduate Certificate Nutrigenetics





Postgraduate Certificate Nutrigenetics

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/nutricion/curso-universitario/nutrigenetica

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

Research on genetics has allowed us to gain a better understanding of human beings and the conditions that determine that some people are predisposed to suffer from diseases such as Obesity.

In this sense, studies have delved into analyzing the genetic variants that contribute to metabolic syndrome, type II diabetes or Cardiovascular Diseases. This knowledge has led nutritionists to design nutritional plans adapted to the circumstances of each patient. In view of

the relevance of this field, TECH has created this 100% online program that will lead the professional

to perform a complete update on Nutrigenetics with a syllabus prepared by leading specialists with experience in the Nutrition sector.





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Get updated in Nutrigenetics with this 100% online and flexible Postgraduate Certificate, designed for professional nutritionists like you”.

Technological advances have led to the identification of genetic variants and their relationship

with certain diseases such as Obesity or type II diabetes which represent

a serious global health problem. Advances in this field and the greater understanding of how the human body works have awakened great interest in the field of Nutrition, given the benefits for patients of adapting their diet according to their genetic information.

In this sense, professionals show a special interest in keeping updated in progress in this area, as well as the different scientific studies that have delved into the emergence of diseases and their approach from Nutrition.

For this reason, TECH has developed this 100% online Postgraduate Certificate, prepared by the best professionals in this field.

Therefore, the graduate will have the opportunity to delve into the most recent research on the variants in the

FTO gene associated with increased risk of overweight, the strengths and weaknesses of GWAS studies, the circadian control of intake, chronobiology and Nutrition. For this, the nutritionist will be provided with multimedia didactic material, specialized readings and case studies, available 24 hours a day, from any electronic device with an Internet connection.

It is, therefore, an advanced program that perfectly combines a high-level theoretical and practical framework with a flexible teaching methodology. In order to access the syllabus, students will not be subject to fixed class schedules and will be able to consult it at any time of the day, from the comfort of their own home.

This **Postgraduate Certificate in Nutrigenetics** contains the most complete and up-to-date scientific program on the market. Its most outstanding features are:

- Case studies presented by experts in Nutrition
- 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 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



The Relearning method will allow you to reduce the hours of study and memorization, while focusing on the most relevant concepts".

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With TECH you will be up to date with the most recent advances in Nutrigenetics and its direct application in patients”.

The program's teaching staff includes professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

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

Essential literature is available to further extend the information provided by this university program.

Delve into the latest SNP findings related to Nutrition at any time of the day and from the comfort of your home.



02 Objectives

This academic proposal has been designed by professionals with extensive experience in the field of Nutrition. In this way, the graduate will be able to obtain the most current information on Nutrigenetics and integrate the advances in this field in the planning and design of diets for their patients. All this, from a theoretical-practical perspective given by the syllabus to which they will have access, whenever and wherever they want, from any electronic device with Internet connection.





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Deepen through the best didactic material in the SNPs related to circadian rhythms”.



General Objectives

- ♦ Acquire theoretical knowledge of 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 prevent disease
- ♦ 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 updated knowledge in the field of Nutritional Genomics and Precision Nutrition to know how to apply it in their professional activity
- ♦ Put all the updated 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

- Acquire the latest knowledge on population genetics.
- Understand how the basis for the interaction between Genetic Variability and Diet is generated
- Introducing the advanced Circadian Control System and Central and Peripheral Clocks

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With this program you will analyze the main cases of GWAS studies related to Obesity”.

03

Course Management

In its commitment to offer high quality content, TECH carries out rigorous selection processes for each and every one of the teachers that make up its programs. In this way, students have the guarantee of accessing a Postgraduate Certificate created by nutritionists specialized in Food Technology and with solid knowledge in Nutrigenetics. Their experience in this field will allow the graduate to obtain a complete update from the hand of real experts and in only 6 weeks.





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Get updated by Nutritionists with a wide trajectory in the sector and deep knowledge in Nutrigenetics”.

International Guest Director

Dr. Caroline Stokes is a specialist in **Psychology** and **Nutrition**, with a doctorate and a habilitation in **Medical Nutrition**. After a distinguished career in this field, she leads the **Food and Health Research** group at the Humboldt University of Berlin. This team collaborates with the Department of Molecular Toxicology at the German Institute of Human Nutrition Potsdam-Rehbrücke. Previously, he has worked at the Medical School of Saarland University in Germany, the Cambridge Medical Research Council and the UK National Health Service.

One of her goals is to discover more about the fundamental role that **Nutrition** plays in improving the overall health of the population. To this end, he has focused on elucidating the effects of fat-soluble vitamins such as **A, D, E and K**, the **amino acid methionine**, lipids such as **omega-3 fatty acids** and **probiotics** for both the prevention and treatment of diseases, particularly those related to hepatology, neuropsychiatry and aging.

Her other lines of research have focused on plant-based diets for the prevention and treatment of diseases, including liver and psychiatric diseases. He has also studied the spectrum of **vitamin D** metabolites in health and disease. She has also participated in projects to analyze new sources of vitamin D in plants and to compare the **luminal** and **mucosal microbiome**.

In addition, Dr. Caroline Stokes has published a long list of scientific papers. Some of her areas of expertise are **Weight Loss**, **Microbiota** and **Probiotics**, among others. The outstanding results of her research and her constant commitment to her work have led her to win the **National Health Service Journal Award for the Nutrition and Mental Health Program** in the UK.



Dr. Stokes, Caroline

- ♦ Head of the Food and Health Research Group at the Humboldt University of Berlin, Germany
- ♦ Researcher at the German Institute of Human Nutrition Potsdam-Rehbruecke
- ♦ Professor of Food and Health at the Humboldt University of Berlin
- ♦ Scientist in Clinical Nutrition at the University of Saarland
- ♦ Nutrition Consultant at Pfizer
- ♦ PhD in Nutrition at the University of Saarland
- ♦ Postgraduate Diploma in Dietetics at King's College London, University of London
- ♦ Master's Degree in Human Nutrition from the University of Sheffield

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Thanks to TECH you will be able to learn with the best professionals in the world”

Management



Dr. Konstantinidou, Valentini

- ◆ Dietitian-Nutritionist Specialist in Nutrigenetics and Nutrigenomics
- ◆ Founder of DNANutricoach
- ◆ Creator of the Food Coaching method to change eating habits
- ◆ Professor in Nutrigenetics
- ◆ Doctorate in Biomedicine
- ◆ Dietitian- Nutritionist
- ◆ Food Technologist
- ◆ Accredited Life Coach of the British body IPAC&M
- ◆ Member of: American Society for Nutrition



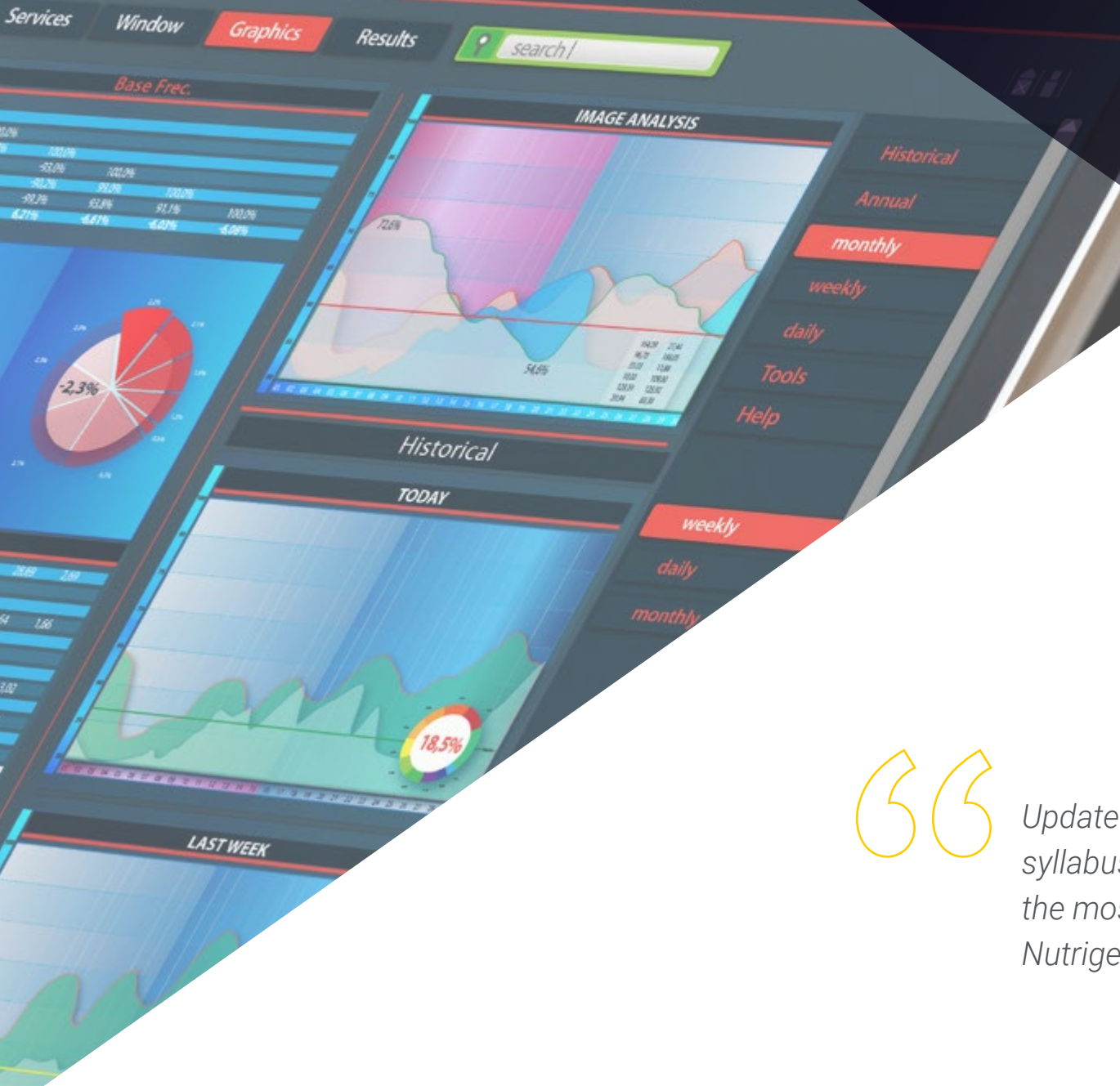
04

Structure and Content

The syllabus of this university program contemplates a course of 150 hours, which provides the nutritionist with the most complete update on Nutrigenetics. In this way, the graduate will delve into the interconnection between the two areas, the influence of genetic variations on the response of a patient to a certain diet, as well as the risk of suffering from certain pathologies related to Nutrition. The graduate will complement this update with the best didactic material, housed in the teaching resources library, 24 hours a day, 7 days a week.



Porta Analysis Report



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Update yourself through a complete syllabus that will provide you with the most current information on Nutrigenetics”.

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





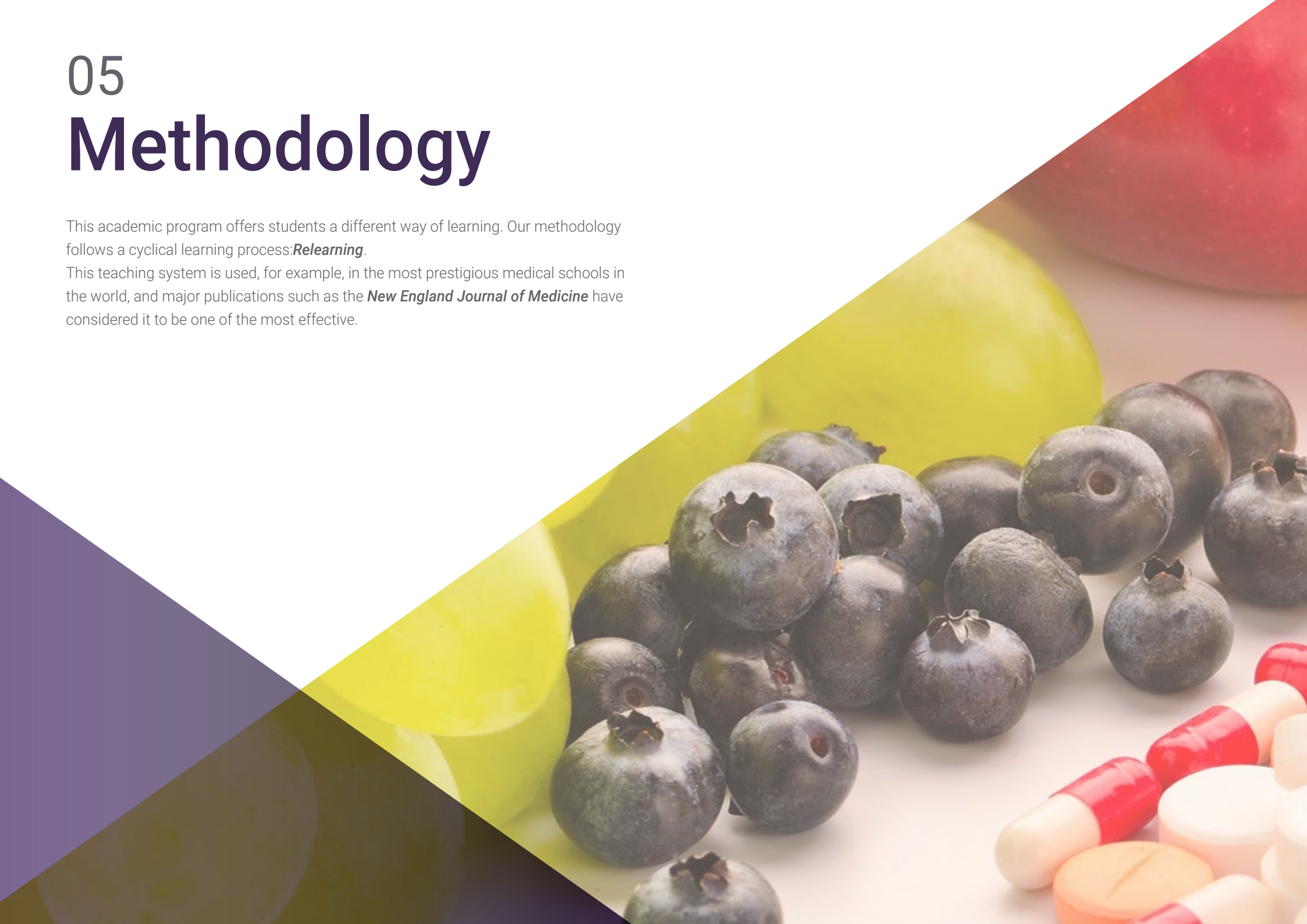
- 1.7. Circadian Control of Intake
 - 1.7.1. Gut-Brain Axis
 - 1.7.2. Molecular and Neurological Basis of the Brain-Gut Connection
- 1.8. Chronobiology and Nutrition
 - 1.8.1. Central Clock
 - 1.8.2. Peripheral Clocks
 - 1.8.3. Circadian Rhythm Hormones
 - 1.8.4. Intake Control (Leptin and Ghrelin)
- 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

“ Thanks to the online and flexible methodology, you will be able to combine your most demanding professional responsibilities with a cutting-edge program”.

05 Methodology

This academic program offers students a different way of learning. Our methodology follows a cyclical learning process: **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.





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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

In a given situation, what should a professional do? 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, 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 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 of professional nutritional practice.

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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 achieve the assimilation of concepts, but also a development of their mental capacity through exercises to assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the nutritionist to better integrate 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.



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.

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 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 45,000 nutritionists have been prepared with unprecedented success in all clinical specialties regardless of the surgical load. 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 education, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we balance 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 adapted in 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.



Nutrition Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. 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.





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 assess and re-assess 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 suggesting that observing third-party experts can be useful.
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 Nutrigenetics guarantees students, in addition to the most rigorous and up-to-date education, access to a certificate issued by TECH Global University.



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*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 Nutrigenetics** 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 Nutrigenetics**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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