

# Postgraduate Diploma Nutrigenetics for Nursing



## Postgraduate Diploma Nutrigenetics for Nursing

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-nutrigenetics-nursing](http://www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-nutrigenetics-nursing)

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# 01

# Introduction

There are individual genetic variants that can influence metabolism and the way the body acquires nutrients. Nutrigenetics consists of the study of these aspects and favors personalized advice to people with any pathology associated with this field. Get up to date with the best Postgraduate Diploma in the current educational panorama and offer specific treatments for each situation, with the support of scientific and medical evidence



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*Nutrigenetics allows us to understand how genetic variants influence metabolism. Do not hesitate any longer and become a Postgraduate Diploma in this field"*

This Postgraduate Diploma details everything a healthcare practitioner needs to know about Nutrigenomics 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 know and learn online all the new developments in the field of genomic nutrition

This Postgraduate Diploma introduces the student to Nutrigenetics, 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 healthcare practitioner will be able to use in their 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 recurrence of these diseases, laying the foundations for genomic 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 for Nursing** 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 Nutrigenetics
- ◆ Theoretical lessons, questions to for the experts, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Train yourself in the broad field of nutrigenetics and offer specialized care to your patients"*



*This Postgraduate Diploma is the best investment you can make in the selection of a refresher program to update your knowledge in Nutrigenetics for Nursing, and you will be awarded a degree by TECH"*

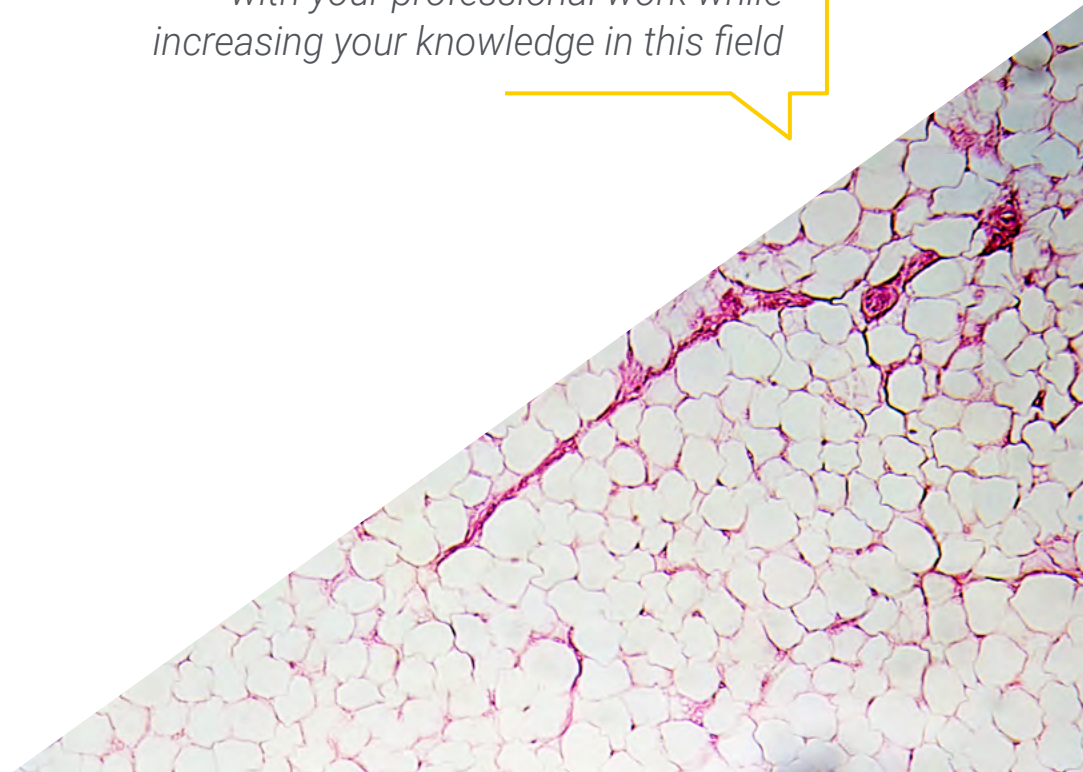
Its teaching staff includes professionals belonging to the field of nutrition, who contribute their work experience to this training, as well as renowned specialists from reference societies and prestigious universities

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, developed by Renowned and Experienced Experts in Nutrigenetics

*The Postgraduate Diploma allows training in simulated environments, which provide immersive learning programmed to train in 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*



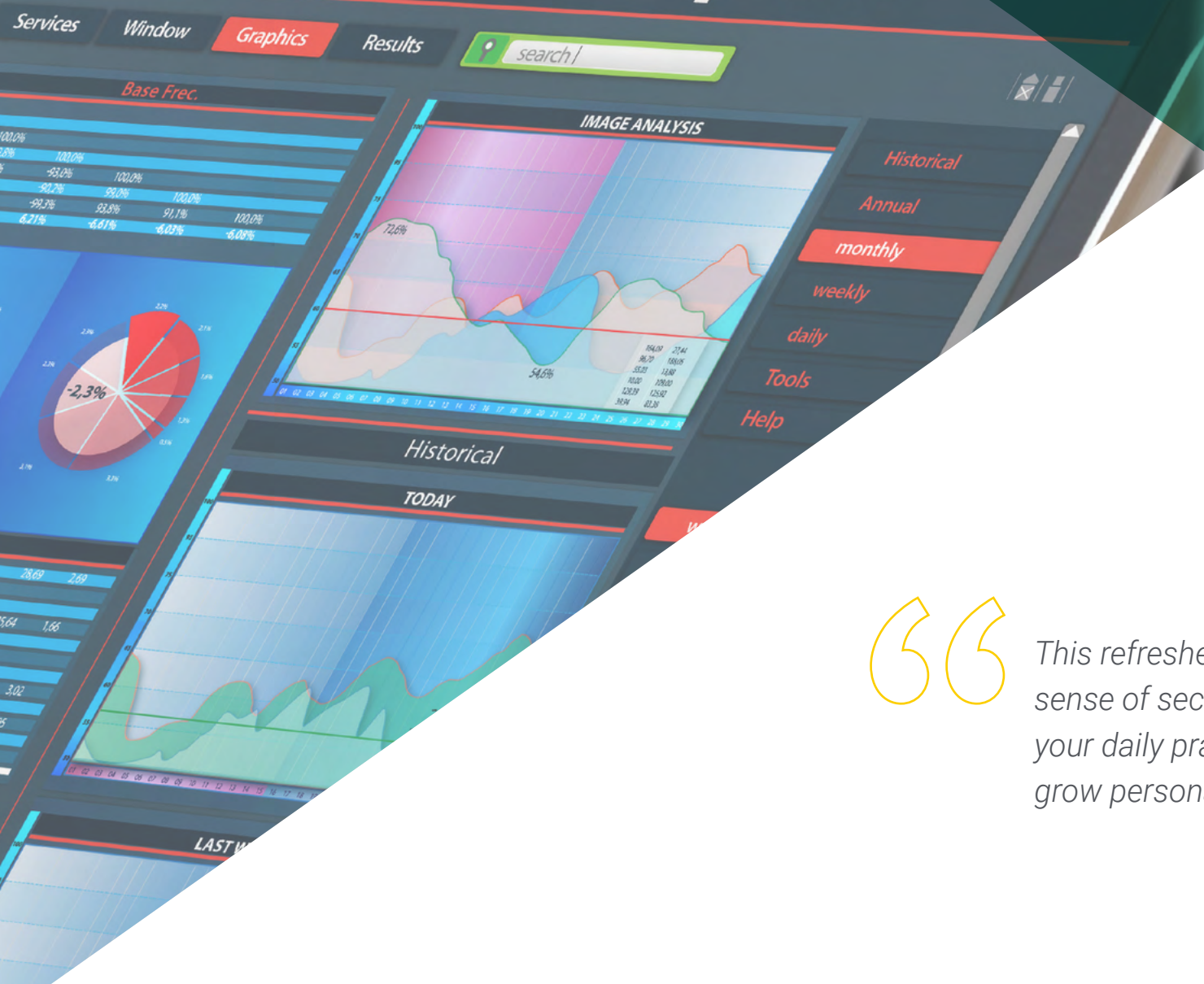
# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the healthcare practitioner can master the study of nutrigenetics in a practical and rigorous way





# Data Analysis Report



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



## General objectives

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- ◆ Acquire theoretical knowledge of human population genetics
- ◆ Acquire knowledge of genomic and precision nutrition to be able to apply it in practice
- ◆ Learn the development of this novel field and the key findings that contributed to its development
- ◆ Know in which pathologies and conditions of human life Genomic and Precision Nutrition can be applied
- ◆ To evaluate individual response to nutrition and dietary patterns in order to promote health and disease prevention
- ◆ Learn how nutrition influences gene expression in humans
- ◆ Learn about new concepts and future trends in the field of Genomic 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 Genomic 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

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### Module 1. Nutrigenetics I

- ◆ 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

### Module 2. Nutrigenetics II - Key Polymorphisms

- ◆ Present the Key Polymorphisms to date related to Human Nutrition and Metabolic Processes that the health practitioner needs to know about
- ◆ 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 Advanced Concepts in Nutrigenetic Research

03

# Course Management

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



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*Leading professionals in the field have come together to teach you the latest developments in Nutrigenetics for Nursing”*

## 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

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- 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

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





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# Structure and Content

The structure of the contents has been designed by a team of professionals who are familiar with the implications of training in daily practice, and who are aware of the relevance of training in Nutritional Genomics and Precision Nutrition. They are committed to quality teaching through new educational technologies





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*We have the most complete and updated scientific program on the market. We strive for the excellence that we want you to achieve 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





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*Una experiencia de capacitación  
única, clave y decisiva para  
impulsar tu desarrollo profesional”*

05

# Methodology

This training program offers a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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***.





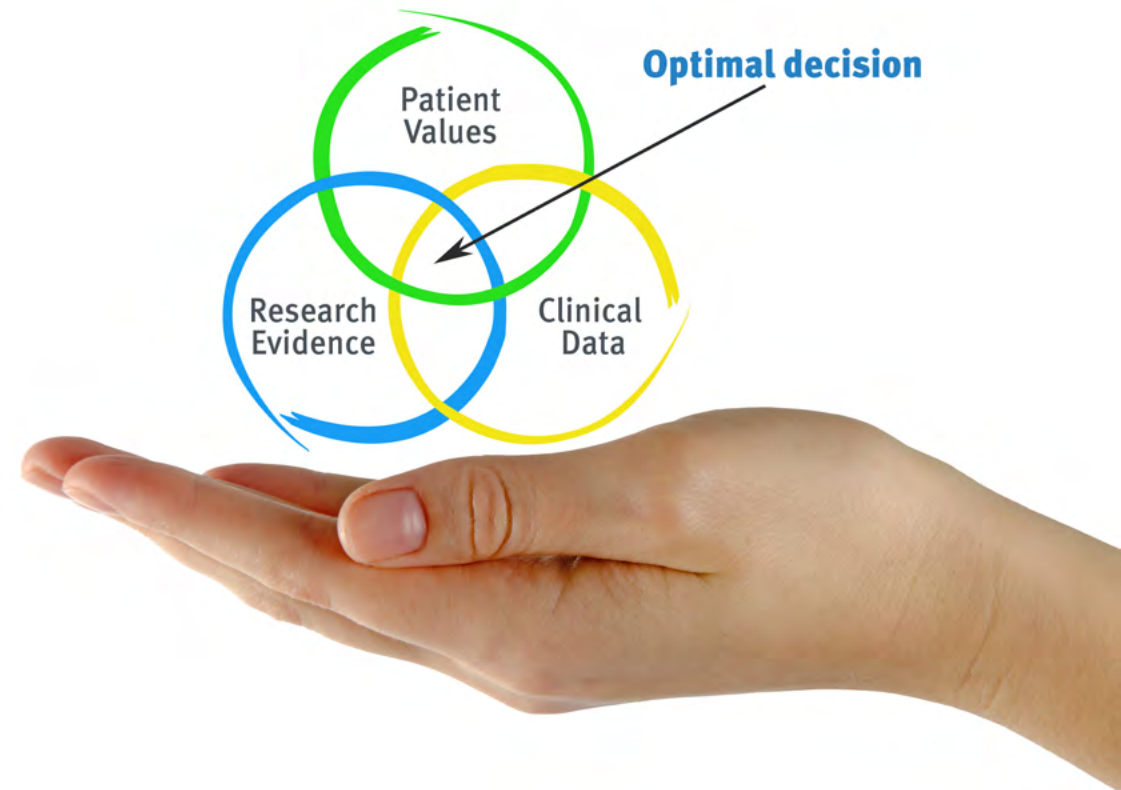
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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".*

## At TECH Nursing School 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. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, 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, in an attempt to recreate the real conditions in professional nursing 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. Nurses 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 process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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.

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



*The nurse 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 online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years old.

*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 (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 really 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.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, 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 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 exclusive multimedia content presentation training Exclusive 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.





#### 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

The student's knowledge is periodically assessed and re-assessed throughout the program, through evaluative and self-evaluative activities and exercises: in this way, students can check how they are doing in terms of 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 Diploma in Nutrigenetics for Nursing guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Diploma issued by TECH Global University







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*Successfully complete this training and receive your university degree without travel or laborious paperwork”*

This program will allow you to obtain your **Postgraduate Diploma in Nutrigenetics for Nursing** 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.

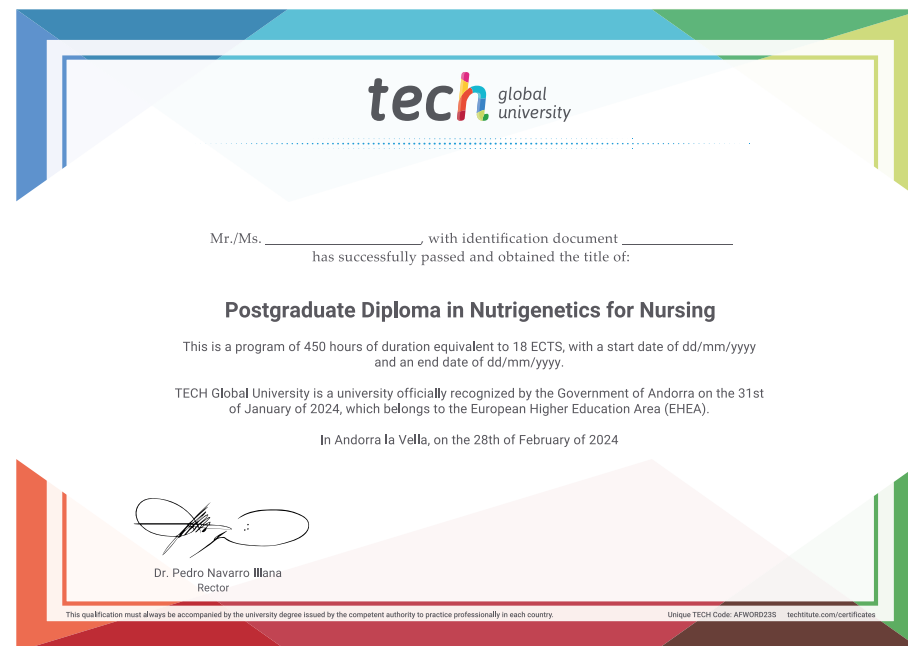
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Nutrigenetics for Nursing**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



\*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.



## Postgraduate Diploma Nutrigenetics for Nursing

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