

Postgraduate Certificate

Nutrigenetics: Key Polymorphisms



Postgraduate Certificate

Nutrigenetics: Key Polymorphisms

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

Website: www.techtute.com/us/medicine/postgraduate-certificate/nutrigenetics-key-polymorphisms

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01

Introduction

SNPs are related, according to numerous scientists, to the development of diseases such as gluten intolerance or obesity. Their adequate mastery makes it possible to optimize the design of dietary plans aimed at preventing these pathologies in patients who have this type of polymorphisms, which is why physicians must be familiar with the latest findings for their management, in order to offer cutting-edge care to their patients. This is why this online program has been designed, through which the specialist will increase their skills in the identification of SNPs linked to the emergence of allergies or weight problems in order to optimize their possible prevention, without depending on tight schedules.



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Master, with this program, the techniques to identify those SNPs linked to the development of different food intolerances in order to optimize their prevention"

Single nucleotide polymorphisms are an excellent indicator to facilitate the localization of genes associated with different types of diseases. Their benefits in this field have led to the development of research studies aimed at analyzing the possible relationship between SNPs and the development of complex pathologies such as those of cardiac origin, diabetes or cancer. Therefore, its validity, its constant evolution and its usefulness to detect the predisposition to suffer from other diseases of a milder nature mean that doctors must have extensive skills in these particularities of DNA to be at the forefront of the world of medicine.

In view of this circumstance, TECH has promoted the creation of this Postgraduate Certificate, with which students will expand their knowledge in the identification of SNPs related to different diseases, vitamin deficiencies or food intolerances. During 6 weeks of intensive learning, students will analyze the single nucleotide polymorphisms linked to the development of addictions to alcohol or caffeine, or to lactose or fructose intolerances. Additionally, it will detect how these SNPs have a direct impact on the sports performance of each person or on the recovery and prevention of injuries.

Thanks to the 100% online methodology in which this program is taught, the student will be able to ideally combine their personal and professional obligations with an exquisite learning experience. Likewise, the didactic contents to which they will have access are designed and elaborated by excellent professionals in the area of Genomic Nutrition, so that the knowledge acquired will be completely applicable in their work experience.

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

- ◆ The development of case studies presented by experts in Nutritional Genomics and Precision Nutrition
- ◆ The graphic, schematic and practical contents with which it is conceived scientific and practical information on those disciplines that are essential for professional practice
- ◆ The practical exercises where the self-evaluation 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 Postgraduate Certificate in Nutrigenetics: Key Polymorphisms will provide you with the necessary tools to detect how SNPs can influence the sports performance of each person"

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Access a Postgraduate Certificate course designed and taught by the best experts in Genomic and Precision Medicine, which will occupy only 6 weeks of your life"

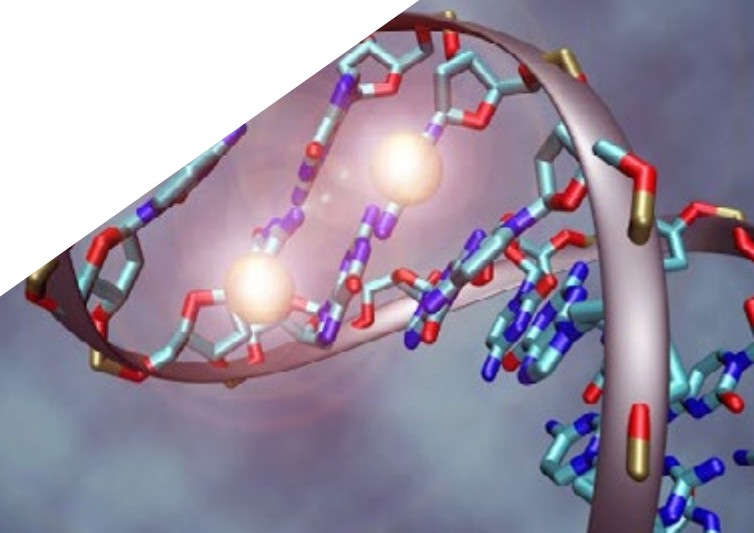
The program includes in its teaching staff professionals of the field who pour into this training the experience of their work, in addition to recognized specialists from reference societies and prestigious universities.

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 and experienced experts.

Enjoy excellent learning through didactic content presented in innovative formats such as interactive summary or explanatory video.

Through this program, you will analyze the single nucleotide polymorphisms that are linked to the development of addictions to alcohol or caffeine.



02 Objectives

TECH has designed this course with the premise of providing the student with a key update on the analysis of single nucleotide polymorphisms related to the possible development of different types of diseases of various kinds. Through this educational experience, they will identify those SNPs linked to intolerances or addictions, in order to improve their health skills, supported at all times by the achievement of these general and specific objectives.



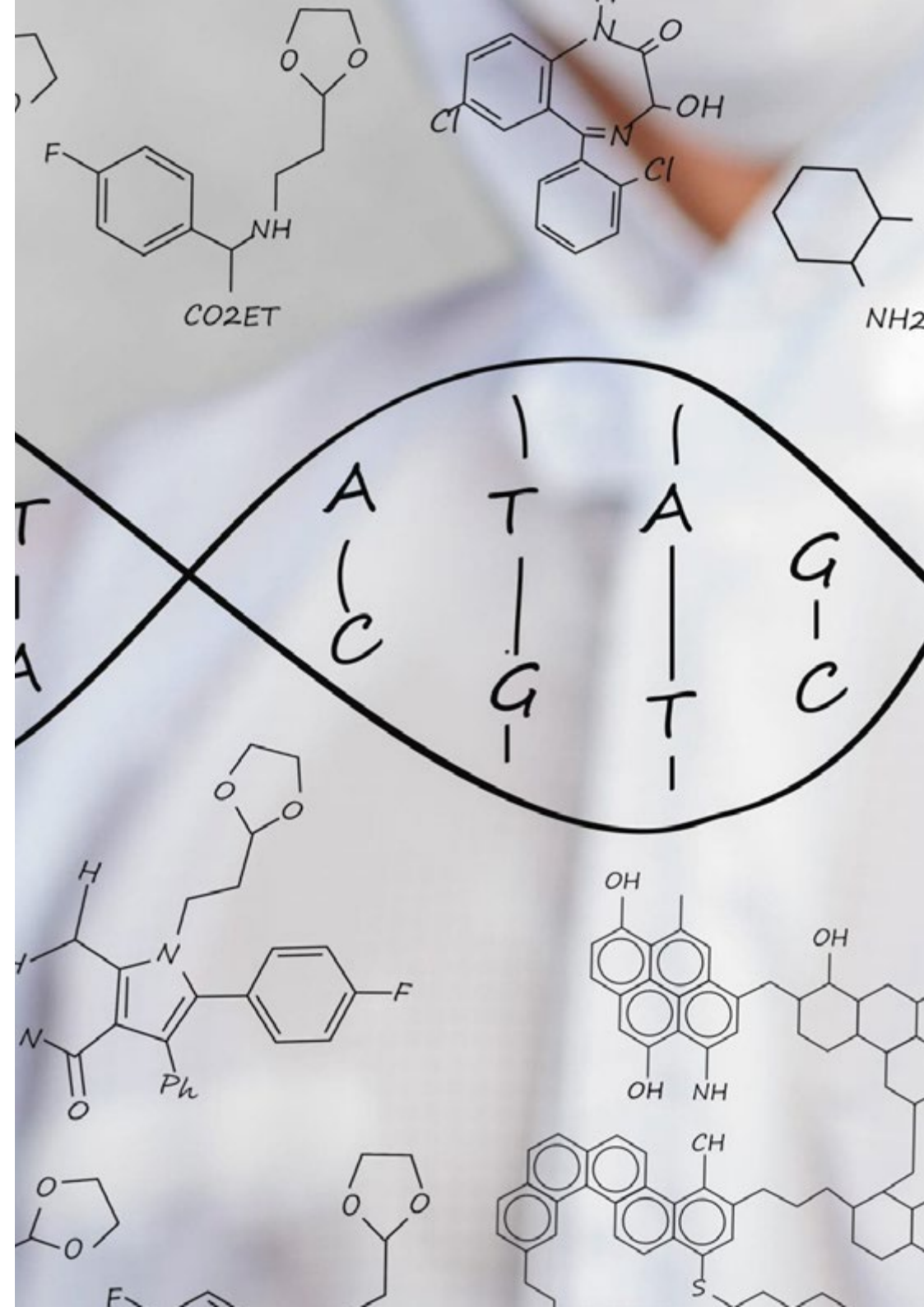
“

Incorporate in your medical practice the most advanced and updated knowledge on PNS and their relationship with different diseases”



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 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 updated knowledge in the field of Nutritional Genomics and Precision Nutrition to know how to apply in their professional activity
- ◆ Put all the updated knowledge in perspective. Where we are now and where we are going and where it is headed so that the student can appreciate the ethical, economic and scientific implications in the field





Specific Objectives

- ◆ Present the Key Polymorphisms to date related to Human Nutrition and Metabolic Processes that the Professional needs to know about
- ◆ Analyze the key studies supporting these polymorphisms and the debate, where it exists
- ◆ Analyze the SNPs related to the development of addictions
- ◆ Detect SNPs linked to the development of various intolerances

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Achieve unparalleled professional growth, in 180 hours alone, thanks to this TECH program”



03

Course Management

As a result of the untiring commitment of this academic institution to provide qualifications with a high educational level, this Postgraduate Certificate has a teaching staff composed of reference professionals who are active in the field of Nutritional Genomics and Precision Nutrition. Moreover, the didactic materials to which the student will have access throughout this academic itinerary have been expressly elaborated by these experts. For this reason, the contents provided will be in tune with the latest developments in this field.



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From the hand of excellent experts in Nutritional Genomics and Precision Nutrition, you will acquire knowledge that will place you at the forefront of this sector"

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

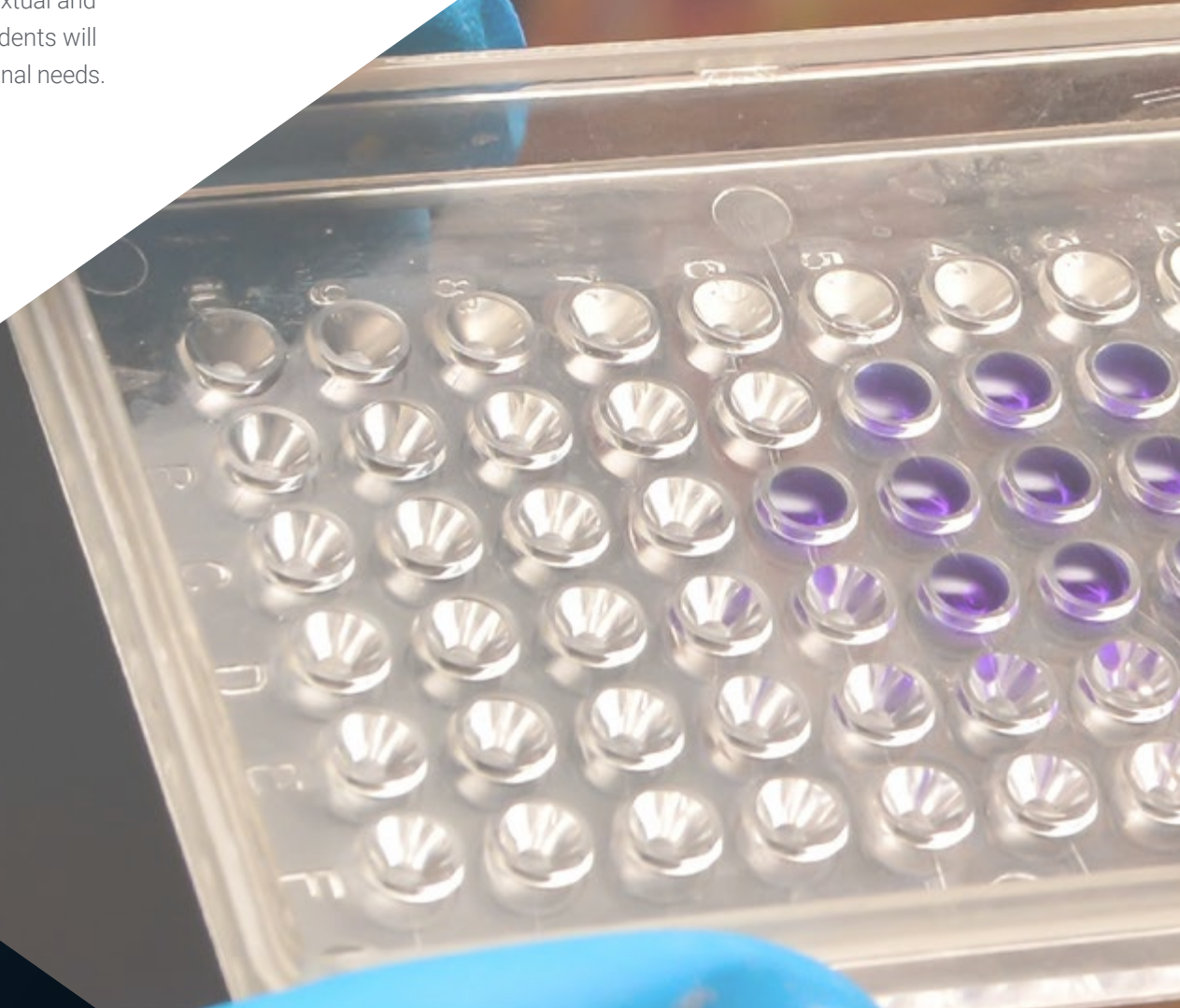
- ♦ Dietitian-Nutritionist Specialist in Nutrigenetics and Nutrigenomics
- ♦ Founder of DNANutricoach
- ♦ Creator of the Food Coaching method to change eating habits
- ♦ Professor in Nutrigenetics
- ♦ Doctor in Biomedicine
- ♦ Dietitian- Nutritionist
- ♦ Food Technologist
- ♦ Accredited Life Coach of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



04

Structure and Content

The syllabus of this program consists of 1 module through which the physician will increase their knowledge of the single nucleotide polymorphisms that lead to the development of various diseases or food intolerances. The didactic resources available to the student throughout this program are present in a wide range of varied textual and multimedia formats. Thanks to this, and with a 100% online methodology, students will acquire a resolute learning process that is adapted to their academic and personal needs.





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Learn at your own pace and without having to limit yourself to pre-established learning times thanks to the Relearning system offered by this Postgraduate Certificate"

Module 1. Nutrigenetics II - Key Polymorphisms

- 1.1. Obesity-Related SNPs
 - 1.1.1. The Story of the Obese Monkey
 - 1.1.2. Appetite Hormones
 - 1.1.3. Thermogenesis
- 1.2. Vitamin-Related SNPs
 - 1.2.1. Vitamin D
 - 1.2.2. B Complex Vitamins
 - 1.2.3. Vitamin E
- 1.3. Exercise-Related SNPs
 - 1.3.1. Strength vs. Competition
 - 1.3.2. Sports Performance
 - 1.3.3. Injury Prevention/Recovery
- 1.4. Oxidative Stress/Detoxification-related SNPs
 - 1.4.1. Genes Encoding Enzymes
 - 1.4.2. Anti-Inflammatory Processes
 - 1.4.3. Phase I+II of Detoxification
- 1.5. SNP related to Addictions
 - 1.5.1. Caffeine
 - 1.5.2. Alcohol
 - 1.5.3. Salt
- 1.6. SNP related to Flavor
 - 1.6.1. Sweet Taste
 - 1.6.2. Salty Taste
 - 1.6.3. Bitter Taste
 - 1.6.4. Acid Taste
- 1.7. SNP vs. Allergies vs. Intolerances
 - 1.7.1. Lactose
 - 1.7.2. Gluten
 - 1.7.3. Fructose
- 1.8. PESA Study





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Enjoy first-class educational content, accessible through formats such as video or interactive summary to ensure effective learning”

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.





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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

What should a professional do in a given situation? 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 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, trying to recreate the real conditions in the physician's professional 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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of 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.

This 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, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving 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 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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 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.



Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and 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 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 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 Nutrigenetics: Key Polymorphisms 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: Key Polymorphisms** 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: Key Polymorphisms**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
online training
development languages
virtual classroom



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