

# Postgraduate Certificate

## Laboratory Techniques for Nutritional Genomics in Nursing



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# Laboratory Techniques for Nutritional Genomics in Nursing

Course Modality: Online

Duration: 6 weeks

Certificate: TECH - Technological University

6 ECTS Credits

Teaching Hours: 150 hours.

Website: [www.techitute.com/us/nursing/postgraduate-certificate/laboratory-techniques-nutritional-genomics-nursing](http://www.techitute.com/us/nursing/postgraduate-certificate/laboratory-techniques-nutritional-genomics-nursing)

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01

# Introduction

Nutritional Genomics is a growing discipline that requires specialized practitioners who are constantly staying up to date. On this occasion we present the best Postgraduate Certificate on the market in laboratory techniques for Nutritional Genomics. A specialization that will allow you to improve your daily practice with the help of the best teaching methodology.



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*If you are in nursing, don't miss the opportunity to specialize in Nutritional Genomics with this specific Postgraduate Certificate on laboratory techniques in this field"*

This Postgraduate Certificate details everything a healthcare practitioner needs to know about laboratory techniques for Nutritional Genomics. Thus, the material is organized in such a way as to advance knowledge without leaving doubts or gaps in information. It is the best education on the market, because it offers the opportunity to learn online all the innovation in the field of Nutritional Genomics.

Specifically, during this Postgraduate Certificate the student will learn all the theory of laboratory techniques used in the field of Nutritional Genomics and precision nutrition. In this way, students will be introduced to the basics so that they can recognize and appreciate them once they are in the laboratory, as well as learn about the bioinformatics programs used in Nutritional Genomics.

This Postgraduate Certificate provides students with specific tools and skills to successfully develop their practitioner activity related to Nutritional Genomics and Precision Nutrition.

As it is an online Postgraduate Certificate, 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 Certificate in Laboratory Techniques for Nutritional Genomics in 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 of the course are designed to provide all the essential information required for professional practice.
- ◆ Practical exercises where self-assessment can be used to improve learning.
- ◆ Its special emphasis on innovative methodologies in laboratory techniques for Nutritional Genomics
- ◆ 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



*Prepare yourself in the broad field of nutritional genomics and offer specialized treatments to your patients"*

“ *This Postgraduate Certificate is the best investment you can make in selecting an Update program to bring your knowledge of laboratory techniques for Nutritional Genomics up to date*”

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.

Its 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 an immersive education 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 practitioner will be assisted by an innovative interactive video system created by renowned and experienced Postgraduate Diploma experts in laboratory techniques for Nutritional Genomics.

*This program offers training in simulated environments, which provides an immersive learning experience designed to train for real-life situations.*

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



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the nursing practitioner can master the study of Nutritional Genomics and precision nutrition in a practical and rigorous way.





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*This refresher program will provide you with a sense of confidence in your daily work, which will help you grow both 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 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 Genomic 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 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 updated information in perspective. Where we are now and where we are going so that the student can appreciate the ethical, economic and scientific implications in the field.





## Specific Objectives

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- ◆ Understand the techniques used in Nutritional Genomics Studies
- ◆ Acquiring the latest advances in Bioinformatics and Biomedical techniques.

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*Take the step and join  
one of the largest online  
universities in the world”*

03

# Course Management

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





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*Leading practitioners in the field  
have come together to teach you the  
latest advances in Genomic Nutrition  
Laboratory Techniques”*

## Management



### Dr. Konstantinidou, Valentini

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

## Professors

### Mr. Anglada, Roger

- ♦ Graduate in Multimedia. Polytechnic University of Catalonia
- ♦ Certificate of Higher Education (HNC) in Superior Technician in Analysis and Control. Narcís Monturiol IES, Barcelona
- ♦ Superior Technical support for research in Genomics Core Facility, Pompeu Fabra University



# 04

# Structure and Content

The structure of the contents has been designed by a team of practitioners knowledgeable about the implications of education in daily practice, aware of the relevance of the current relevance of the preparation in Nutritional Genomics and Precision Nutrition; and committed to quality teaching through new educational technologies.





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*We have the most complete and up-to-date Scientific Program in the Market. We strive for excellence and for you to achieve it too"*

## Module 1. Laboratory Techniques for Nutritional Genomics

- 1.1. Molecular Biology Laboratory
  - 1.1.1. Basic Instructions
  - 1.1.2. Basic Material
  - 1.1.3. Accreditations Required in the US.
- 1.2. DNA Extraction
  - 1.2.1. From Saliva
  - 1.2.2. From Blood
  - 1.2.3. From Other Fabrics.
- 1.3. Real-Time PCR
  - 1.3.1. Introduction - History of the Method.
  - 1.3.2. Basic Protocols Used.
  - 1.3.3. Most Used Equipment.
- 1.4. Sequencing
  - 1.4.1. Introduction - History of the Method.
  - 1.4.2. Basic Protocols Used.
  - 1.4.3. Most Used Equipment.
- 1.5. High-throughput
  - 1.5.1. Introduction - History of the Method.
  - 1.5.2. Examples of Human Studies.
- 1.6. Gene Expression - Genomics - Transcriptomics
  - 1.6.1. Introduction - History of the Method
  - 1.6.2. Microarrays
  - 1.6.3. Microfluidic Cards
  - 1.6.4. Examples of Human Studies
- 1.7. Omics Technologies and their Biomarkers
  - 1.7.1. Epigenomics
  - 1.7.2. Proteomics
  - 1.7.3. Metabolomics
  - 1.7.4. Metagenomics
- 1.8. Bioinformatics Analysis
  - 1.8.1. Pre- and post-Computing Bioinformatics Programs and Tools
  - 1.8.2. GO Terms, Clustering of DNA Microarray Data
  - 1.8.3. Functional Enrichment, GEPAS, Babelomics



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



05

# Methodology

This training provides you with a different way of learning. 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.





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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 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. 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. 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, 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 university program.



## 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 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 Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success, in all specialties regardless of from 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.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current nursing 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

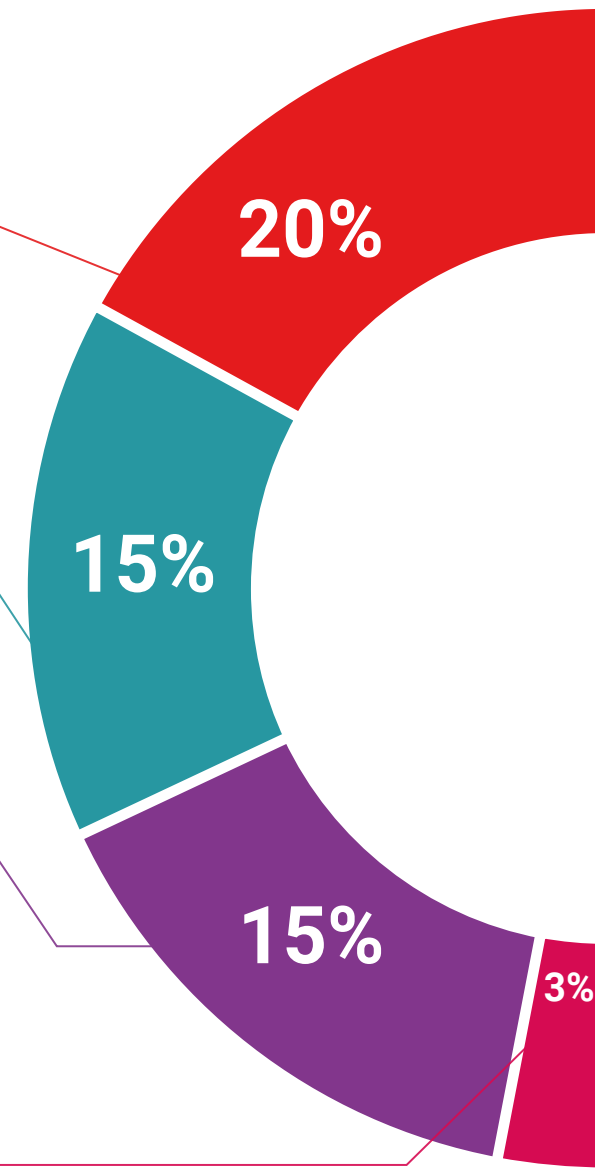
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system 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 training.





#### 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 & Retesting

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 Certificate in Laboratory Techniques for Nutritional Genomics in Nursing guarantees, in addition to the most rigorous and up-to-date training, access to a university degree issued by TECH - Technological University.



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*Include in your specialization a Postgraduate Certificate in Laboratory Techniques for Nutritional Genomics in Nursing, a highly qualified added value for any practitioner in this area"*

This Postgraduate Certificate in Laboratory Techniques for Nutritional Genomics in Nursing contains the most complete and up-to-date scientific program on the market.

After students have passed the assessments, they will receive their **Postgraduate Certificate** issued by **TECH - Technological University**.

The diploma issued by **TECH - Technological University** will reflect the qualification obtained in the Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: University Course Laboratory Techniques for Nutritional Genomics in Nursing

ECTS: 6

Official Number of Hours: 150



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



**Postgraduate Certificate**  
Laboratory Techniques  
for Nutritional Genomics  
in Nursing

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Teaching Hours: 150 hours.

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