Master's Degree
Nutritional Genomics and Precision Nutrition

tech global university

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Master's Degree
Nutritional Genomics and Precision Nutrition

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/pharmacy/master-degree/master-nutritional-genomics-precision-nutrition**

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01

Introduction

Since the emergence of the Human Genome Project, studies in different disciplines have advanced considerably in the understanding of the body. One of the lines of research that has experienced a significant boom is the relationship between personalized nutrition in the prevention and treatment of certain pathologies. These findings are relevant to the pharmaceutical field, which is widely concerned with the relationship between polymorphisms, clinical experience and nutritional pharmacology. In this 100% online program, professionals will be able to find the most advanced and up-to-date information in this field, thanks to the excellent content prepared by a teaching team specialized in this area.

With this university program, you will have 24-hour access to the latest knowledge in Nutritional Genomics and Precision Nutrition and the existing ethical debates"

New technologies have boosted research and the emergence of Nutritional Genomics as a branch of science, which has undergone considerable development, breaking the traditional ideas on the concepts of diet and morbidity. These lines of research have clearly outlined the potential of the application of nutritional genomics in the population.

The perfection of nutrigenetic tests and the involvement of laboratories in perfecting and individualizing treatments means that the pharmaceutical professional must constantly update their knowledge. This Master's Degree gives you the opportunity to keep abreast of the latest information on precision medicine, obesity-related PNS, vitamins, oxidative stress or addictions.

A knowledge update that students will achieve thanks to the educational tools developed by TECH, using the latest technology applied to academic teaching. Using video summaries, detailed videos, diagrams or specialized reading material, the professional will delve into the ethical and legal debate raised by the advances made in this field in a much more attractive way.

The professional is, therefore, facing an excellent opportunity to keep up to date in Nutritional Genomics and Precision Nutrition, through an education provided completely online. As a result, students will only need an electronic device to access the syllabus hosted on the virtual campus. This Master's Degree is ideal for people who want to combine a university program with even the most demanding responsibilities.

This **Master's Degree in Nutritional Genomics and Precision Nutrition** contains the most complete and up-to-date scientific program on the market. Its most notable 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 self-assessment can be used to improve learning
- 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

This program provides you with educational resources in keeping with the current times, developed by the best specialists in Nutritional Genomics"

A program that offers 1,500 teaching hours of current, innovative and comprehensive information on Nutritional Genomics and Precision Nutrition"

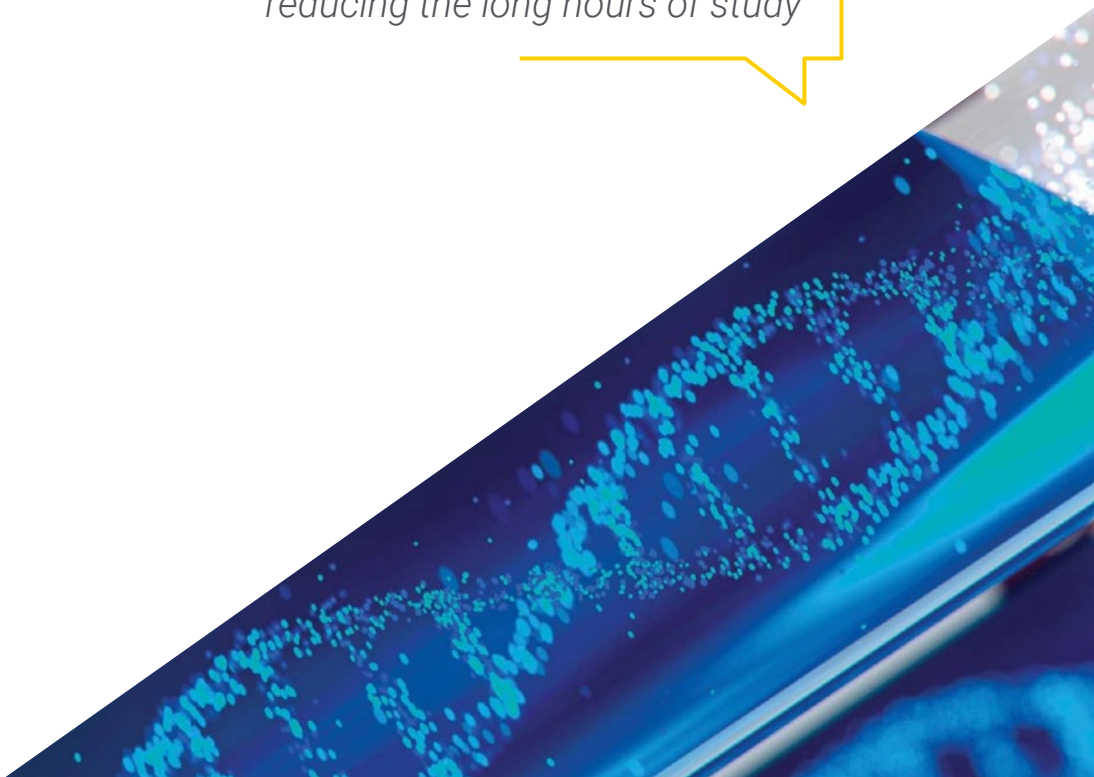
This academic program will allow you to learn about advances in Nutritional Genomics as well as treatments for patients with neuropsychiatric diseases

TECH uses the Relearning system to ensure that the professional is able to progress smoothly through the syllabus, reducing the long hours of study

The program's teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading 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 education programmed to learn 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 student will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

The main objective of this Master's Degree is to ensure that pharmacist professionals conclude this program with the most up-to-date knowledge on Nutritional Genomics and Precision Nutrition. For this purpose, multimedia resources will bring students closer to the latest scientific information on nutrition and its influence on human gene expression, individual response to food and dietary patterns and disease prevention. All this, in addition to an expert teaching team that will guide students towards achieving their goals.

This Master's Degree will introduce you to new concepts and the most recent laboratory techniques used in Nutritional Genomics"

General Objectives

- 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 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

Delve into MicroRNA and their implication in Genomic Nutrition at any time from any device"

Specific Objectives

Module 1. Introduction Nutritional Genomics and Precision Nutrition
- Present definitions necessary to follow the thread of the following modules.
- Explain relevant points of human DNA, nutritional epidemiology, scientific method
- Analyze key studies in Genomic Nutrition.

Module 2. Laboratory Techniques for Nutritional Genomics
- Understand the techniques used in Nutritional Genomics Studies
- Acquire the latest advances in omics and bioinformatics techniques

Module 3. Biostatistics for Nutritional Genomics
- Acquire the necessary knowledge to correctly design experimental studies in the areas of nutrigenomics and nutrigenetics
- Delve into statistical models for clinical studies in humans

Module 4. Nutrigenetics I
- Acquire the latest knowledge on population genetics
- Understand how the basis for the interaction between Genetic Variability and Diet is generated
- Introduce the advanced Circadian Control System and Central and Peripheral Clocks

Module 5. Nutrigenetics II - Key Polymorphisms
- Present the key polymorphisms to date related to human nutrition and metabolic processes that the professional needs to know about
- Analyze the key studies that support these polymorphisms and the debate, where it exists

Module 6. Nutrigenetics III
- Present the key polymorphisms to date related to complex diseases that depend on nutritional habits
- Introduce new advanced concepts in nutrigenetic research

Module 7. Nutrigenomics
- Deepen knowledge of the differences between nutrigenetics and nutrigenomics
- Present and analyze genes related to metabolic processes affected by nutrition

Module 8. Metabolomics-Proteomics
- Know the principles of metabolomics and proteomics
- Study microbiota as a tool for preventive and personalized nutrition

Module 9. Epigenetics
- Explore the basis of the relationship between epigenetics and nutrition
- Present and analyze how microRNA is involved in nutritional genomics

Module 10. Current Market State
- Present and analyze key aspects for the application of nutritional genomics in society
- Reflect on and analyze past and present cases and anticipate future market developments in the field of nutritional genomics

03

Skills

The syllabus of this university program has been designed so that students can broaden their skills in the field of nutrigenetics, nutrigenomics and new scientific data in the approach to chronic diseases. Moreover, this knowledge can be integrated into your daily practice thanks to the exhaustive content provided by this course.

This program will show you the trends in the field of Nutritional Genomics and its challenges"

General Skills

- Conduct individual reflective work on new Nutrigenetics and Precision Nutrition data
- Study and evaluate current controversial issues on this subject
- Evaluate and use commercially available Genomic and Precision Nutrition tools in their clinical practice

Obtain the latest information on nutrigenetics from real professionals in the field of Biomedicine with this university program"

Specific Skills

- Distinguish between Nutrigenetics and Nutrigenomics
- Possess and understand original knowledge within the broader context of nutrition
- Apply critical, logical and scientific thinking to nutritional recommendations
- Understand the global context of Genomic and Precision Nutrition
- Gain in-depth knowledge of all fields of Genomic and Precision Nutrition, its history and future applications
- Acquire the latest advances in nutritional research
- Know the strategies used in research to identify the loci and genetic variants studied by Nutrigenetics
- Know how the advances in Genomic Nutrition were generated and what skills are necessary to keep constantly up to date
- Formulate new hypotheses and work in an inter-disciplinary manner
- Integrate knowledge and deal with the complexity of data, evaluate relevant literature to incorporate scientific advances into your own professional field
- Understand how the scientific knowledge of Nutrigenetics and Nutrigenomics is translated and applied to clinical use in today's society
- Apply knowledge of Genomic Nutrition for the promotion of health
- Know the theory of basic laboratory techniques used in genomic nutrition
- Know the basis of statistical analyses used in nutritional genomics
- Know the current state of the market in the field of nutritional genomics
- Know the trends in the field of nutritional genomics
- Understand the process of discovering new Genetic Nutrition data and the process of evaluating it prior to use
- Delve into the analysis of different types of studies in genetic epidemiology in order to be able to perform an adequate interpretation of the articles published in this field and identify the limitations of each type of study

04

Course Management

Pharmacists who take this Master's Degree will be guided by a team of teachers specialized in Biomedicine with professional experience in this new field. Their extensive knowledge in this area will allow students to learn first-hand about the advances that have been made in Nutritional Genomics and Precision Nutrition, as well as the lines of research and the ethical and legal debate that it raises in the scientific community.

Over the course of 12 months, professionals in Nutritional Genomics and Precision Nutrition will accompany you so that you can stay up to date in this field"

Management

Dr. Konstantinidou, Valentini

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

Professors

Dr. García Santamarina, Sarela

- PhD in Biomedical Research from Pompeu Fabra University, Barcelona, Spain
- Master's Degree in Molecular Biology of Infectious Diseases, London School of Hygiene & Tropical Medicine, London, UK
- Master's Degree in Biochemistry and Molecular Biology, Autonomous University of Barcelona, Spain
- Degree in Chemistry. Major in Organic Chemistry, University of Santiago de Compostela, Spain
- Specialist in Biomedicine

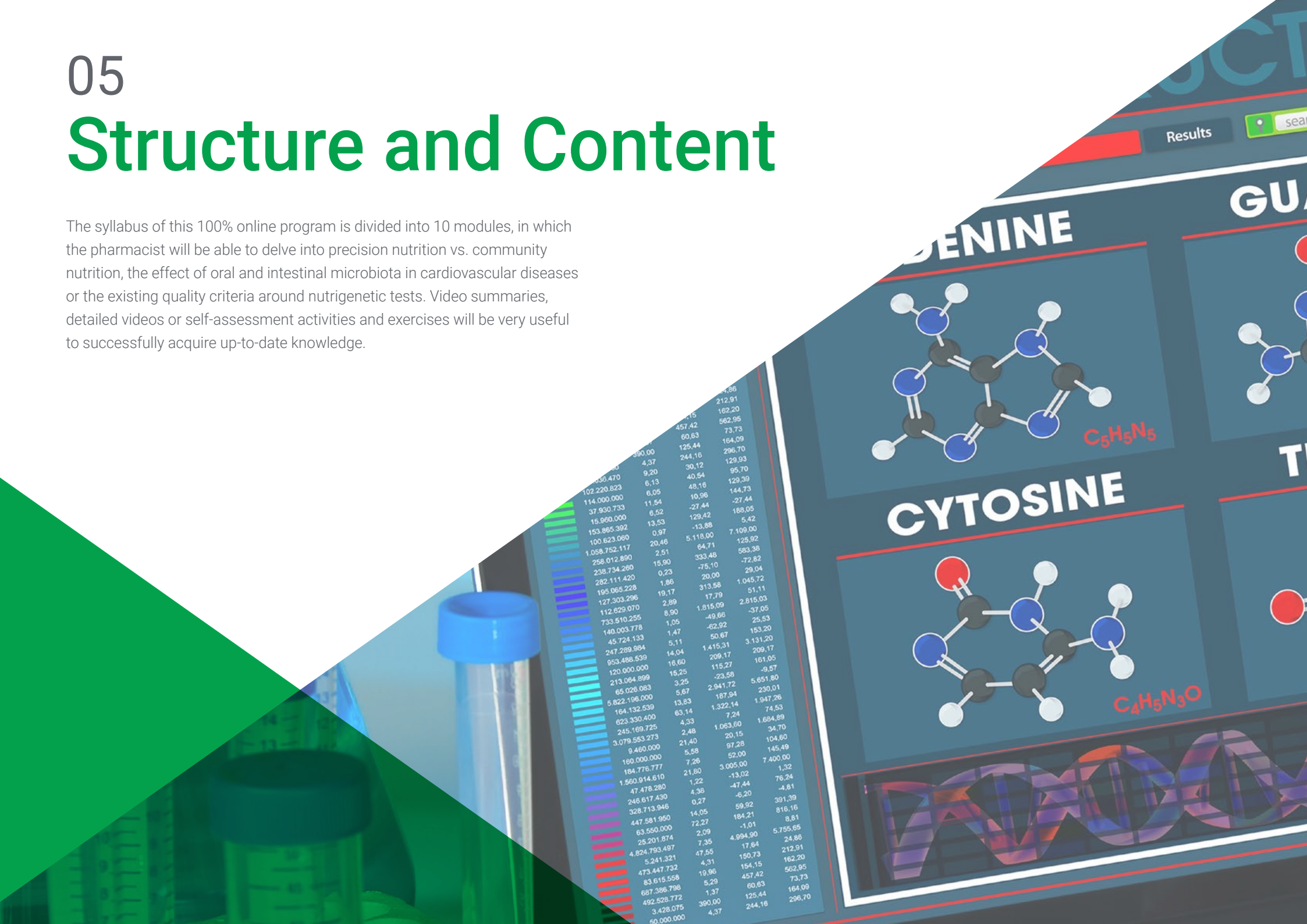
Mr. Anglada, Roger

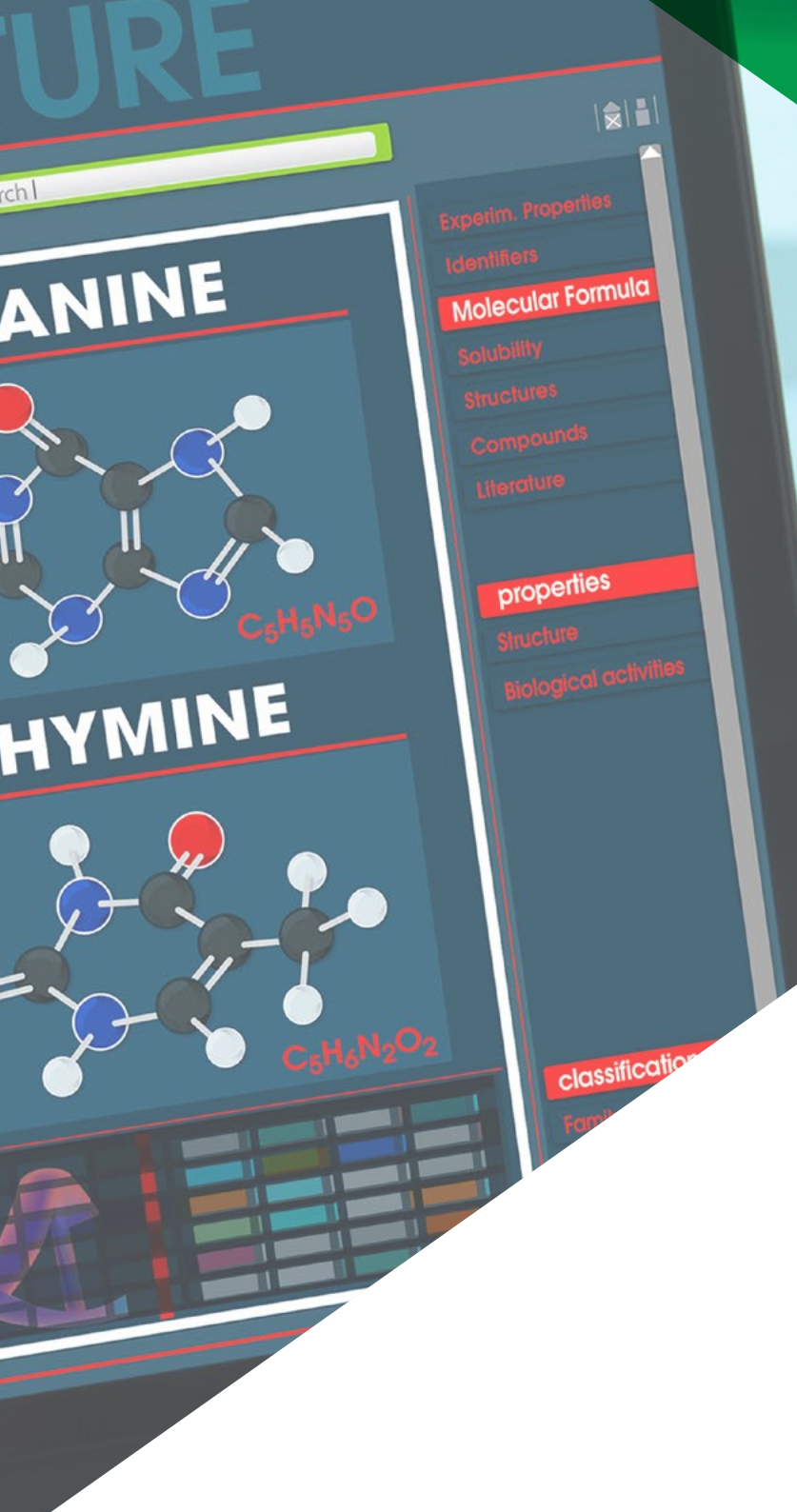
- Graduate in Multimedia, Catalunya Open University
- Senior Technician in Analysis and Control, Institute of Secondary Education Narcís Monturiol, Barcelona
- Senior Research Support Technician at the Genomics Service of Pompeu Fabra University
- Specialist in Nutritional Genomics

05

Structure and Content

The syllabus of this 100% online program is divided into 10 modules, in which the pharmacist will be able to delve into precision nutrition vs. community nutrition, the effect of oral and intestinal microbiota in cardiovascular diseases or the existing quality criteria around nutrigenetic tests. Video summaries, detailed videos or self-assessment activities and exercises will be very useful to successfully acquire up-to-date knowledge.





Innovative content that will allow you to learn about scientific studies on polymorphisms and their relationship with obesity or intolerances"

Module 1. Introduction to Nutritional Genomics and Precision Nutrition

1.1 The Human Genome
- 1.1.1. DNA Discovery
- 1.1.2. Year 2001
- 1.1.3. Human Genome Project

1.2. Variations of Interest in Nutrition
- 1.2.1. Genomic Variations and the Search for Disease Genes
- 1.2.2. Environment vs. Genetic Factor and Heritability
- 1.2.3. Differences between SNPs, Mutations and CNVs

1.3. The Genome of Rare and Complex Diseases
- 1.3.1. Examples of Rare Diseases
- 1.3.2. Examples of Complex Diseases
- 1.3.3. Genotype and Phenotype

1.4. Precision Medicine
- 1.4.1. Influence of Genetics and Environmental Factors in Complex Diseases
- 1.4.2. Need for Precision The problem of Missing Heritability Concept of Interaction

1.5. Precision Nutrition vs. Community Nutrition
- 1.5.1. The Principles of Nutritional Epidemiology
- 1.5.2. Current Bases of Nutritional Research
- 1.5.3. Experimental Designs in Precision Nutrition

1.6. Levels of Scientific Evidence
- 1.6.1. Epidemiological Pyramid
- 1.6.2. Regulation
- 1.6.3. Official Guides

1.7. Consortia and Major Studies in Human Nutrition and Genomic Nutrition
- 1.7.1 Project Precision4Health
- 1.7.2. Framingham
- 1.7.3. PREDIMED
- 1.7.4. CORDIOPREV

1.8. Current European Studies
- 1.8.1. PREDIMED Plus
- 1.8.2. NU-AGE
- 1.8.3. FOOD4me
- 1.8.4. EPIC

Module 2. Laboratory Techniques for Nutritional Genomics

2.1. Molecular Biology Laboratory
- 2.1.1. Basic Instructions
- 2.1.2. Basic Material
- 2.1.3. Accreditations Required in the U.S.

2.2. DNA Extraction
- 2.2.1. From Saliva
- 2.2.2. From Blood
- 2.2.3. From Other Fabrics

2.3. Real-Time PCR
- 2.3.1. Introduction - History of the Method
- 2.3.2. Basic Protocols Used
- 2.3.3. Most Used Equipment

2.4. Sequencing
- 2.4.1. Introduction - History of the Method
- 2.4.2. Basic Protocols Used
- 2.4.3. Most Used Equipment

2.5. High-Throughput
- 2.5.1. Introduction - History of the Method
- 2.5.2. Examples of Human Studies

2.6. Gene Expression - Genomics - Transcriptomics
- 2.6.1. Introduction - History of the Method
- 2.6.2. Microarrays
- 2.6.3. Microfluidic Cards
- 2.6.4. Examples of Human Studies

2.7. Omics Technologies and their Biomarkers
- 2.7.1. Epigenomics
- 2.7.2. Proteomics
- 2.7.3. Metabolomics
- 2.7.4. Metagenomics

2.8. Bioinformatics Analysis
- 2.8.1. Pre- and Post-Computing Bioinformatics Programs and Tools
- 2.8.2. GO Terms, Clustering of DNA Microarray Data
- 2.8.3. Functional Enrichment, GEPAS, Babelomics

Module 3. Biostatistics for Genomic Nutrition

3.1. Biostatistics
- 3.1.1. Human Studies Methodology
- 3.1.2. Introduction to Experimental Design
- 3.1.3. Clinical Studies

3.2. Statistical Aspects of a Protocol
- 3.2.1. Introduction, Objectives and Description of Variables
- 3.2.2. Quantitative Variables
- 3.2.3. Qualitative Variables

3.3. Design of Clinical Studies in Humans, Methodological Guidelines
- 3.3.1. Designs with 2 Treatments 2x2
- 3.3.2. Designs with 3 Treatments 3x3
- 3.3.3. Parallel, Cross-Over, Adaptive Design
- 3.3.4. Sample Size Determination and Power Analysis

3.4. Evaluation of Treatment Effect
- 3.4.1. For Parallel Design, for Repeated Measurements, for Cross-Over Design
- 3.4.2. Randomization of the Order of Treatment Assignment
- 3.4.3. Carry-Over Effect (Wash Out)

3.5. Descriptive Statistics, Hypothesis Testing, Risk Calculation
- 3.5.1. Consort, Populations
- 3.5.2. Study Populations
- 3.5.3. Control Group
- 3.5.4. Subgroup Analysis Types of Studies

3.6. Statistical Errors
- 3.6.1. Measurement Errors
- 3.6.2. Random Error
- 3.6.3. Systematic Error

3.7. Statistical Bias
- 3.7.1. Selection Bias
- 3.7.2. Observation Bias
- 3.7.3. Assignment Bias

3.8. Statistical Modeling
- 3.8.1. Continuous Variable Models
- 3.8.2. Categorical Variables Models
- 3.8.3. Linear Mixed Models
- 3.8.4. Missing data, Flow of Participants, Presentation of Results
- 3.8.5. Adjustment for Baseline Values, Transformation of Response Variable: Differences, Ratios, Logarithms, Carry-Over Evaluation

3.9. Statistical Modeling with Co-Variables
- 3.9.1. ANCOVA
- 3.9.2. Logistic Regression for Binary and Count Variables
- 3.9.3. Multivariate Analysis

3.10. Statistical Programs
- 3.10.1. The R
- 3.10.2. SPSS

Module 4. Nutrigenetics I

4.1. Nutrigenetics Authorities and Organizations
- 4.1.1. NUGO
- 4.1.2. ISNN
- 4.1.3. Evaluation Committees

4.2. GWAS I Studies
- 4.2.1. Population Genetics - Design and Use
- 4.2.2. Hardy-Weinberg Law
- 4.2.3. Linkage Imbalance

4.3. GWAS II
- 4.3.1. Allelic and Genotypic Frequencies
- 4.3.2. Gene-Disease Association Studies
- 4.3.3. Association Models (Dominant, Recessive, Co-Dominant)
- 4.3.4. Genetic Scores

4.4. The Discovery of Nutrition-Related SNPs
- 4.4.1. Key Studies-Design
- 4.4.2. Main Results

4.5. The Discovery of SNPs Associated with Nutrition-Related Diseases (Diet-Depended)
- 4.5.1. Cardiovascular Diseases
- 4.5.2. Diabetes Mellitus Type II
- 4.5.3. Metabolic Syndrome

4.6. Main Obesity-Related GWAS
- 4.6.1. Strengths and Weaknesses
- 4.6.2. The FTO Example

4.7. Circadian Control of Intake
- 4.7.1. Gut-Brain Axis
- 4.7.2. Molecular and Neurological Basis of the Brain-Gut Connection

4.8. Chronobiology and Nutrition
- 4.8.1. Central Clock
- 4.8.2. Peripheral Clocks
- 4.8.3. Circadian Rhythm Hormones
- 4.8.4. Intake Control (Leptin and Ghrelin)

4.9. SNPs Related to Circadian Rhythms
- 4.9.1. Regulatory Mechanisms of Satiety
- 4.9.2. Hormones and Intake Control
- 4.9.3. Possible Pathways Involved

Module 5. Nutrigenetics II - Key Polymorphisms

5.1. Obesity-Related SNPs
- 5.1.1. The Story of the "Obese Monkey"
- 5.1.2. Appetite Hormones
- 5.1.3. Thermogenesis

5.2. Vitamin-Related SNPs
- 5.2.1. Vitamin D
- 5.2.2. B Complex Vitamins
- 5.2.3. Vitamin E

5.3. Exercise-Related SNPs
- 5.3.1. Strength vs. Competition
- 5.3.2. Sports Performance
- 5.3.3. Injury Prevention/Recovery

5.4. Oxidative Stress/Detoxification-Related SNPs
- 5.4.1. Genes Encoding Enzymes
- 5.4.2. Anti-Inflammatory Processes
- 5.4.3. Phase I+II of Detoxification

5.5. SNP Related to Addictions
- 5.5.1. Caffeine
- 5.5.2. Alcohol
- 5.5.3. Salt

5.6. SNP Related to Flavor
- 5.6.1. Sweet Taste
- 5.6.2. Salty Taste
- 5.6.3. Bitter Taste
- 5.6.4. Acid Taste

5.7. SNP vs. Allergies vs. Intolerances
- 5.7.1. Lactose
- 5.7.2. Gluten
- 5.7.3. Fructose

5.8. PESA Study

Module 6. Nutrigenetics III

6.1. SNPs Predisposing to Complex Nutrition-Related Diseases - Genetic Risk Scores (GRS)
6.2. Type II Diabetes
6.3. Hypertension
6.4. Arteriosclerosis
6.5. Hyperlipidemia
6.6. Cancer
6.7. The Exposome Concept
6.8. Metabolic Flexibility Concept
6.9. Current Studies-Challenges for the Future

Module 7. Nutrigenomics

7.1. Differences and Similarities with Nutrigenetics
7.2. Bioactive Components of Diet on Gene Expression
7.3. The Effect of Micro and Macro Nutrients on Gene Expression
7.4. The Effect of Dietary Patterns on Gene Expression
- 7.4.1. The Mediterranean Diet Example

7.5. Main Studies in Gene Expression
7.6. Genes Related to Inflammation
7.7. Genes Related to Insulin Sensitivity
7.8. Genes related to Lipid Metabolism and Adipose Tissue Differentiation
7.9. Genes Related to Arteriosclerosis
7.10. Genes Related to the Myosceletal System

Module 8. Metabolomics-Proteomics

8.1. Proteomics
- 8.1.1. Principles of Proteomics
- 8.1.2. The Flow of Proteomics Analysis

8.2. Metabolomics
- 8.2.1. Principles of Metabolomics
- 8.2.2. Targeted Metabolomics
- 8.2.3. Non-Targeted Metabolomics

8.3. The Microbiome/Microbiota
- 8.3.1. Microbiome Data
- 8.3.2. Human Microbiota Composition
- 8.3.3. Enterotypes and Diet

8.4. Main Metabolomic Profiles
- 8.4.1. Application to Disease Diagnosis
- 8.4.2. Microbiota and Metabolic Syndrome
- 8.4.3. Microbiota and Cardiovascular Diseases Effect of the Oral and Intestinal Microbiota

8.5. Microbiota and Neurodegenerative Diseases
- 8.5.1. Alzheimer's Disease
- 8.5.2. Parkinson's Disease
- 8.5.3. ALS

8.6. Microbiota and Neuropsychiatric Diseases
- 8.6.1. Schizophrenia
- 8.6.2. Anxiety, Depression, Autism

8.7. Microbiota and Obesity
- 8.7.1. Enterotypes
- 8.7.2. Current Studies and State of Knowledge

Module 9. Epigenetics

9.1. History of Epigenetics - The Way I Feed my Grandchildren's Inheritance

9.2. Epigenetics vs. Epigenomics

9.3. Methylation
- 9.3.1. Examples of Folate and Choline, Genistein
- 9.3.2. Examples of Zinc, Selenium, Vitamin A, Protein Restriction

9.4. Histone Modification
- 9.4.1. Examples of Butyrate, Isothiocyanates, Folate and Choline
- 9.4.2. Examples of Retinoic Acid, Protein Restriction

9.5. MicroRNA
- 9.5.1. Biogenesis of MicroRNAs in Humans
- 9.5.2. Mechanisms of Action-Regulating Processes

9.6. Nutrimiromics
- 9.6.1. Diet-Modulated MicroRNAs
- 9.6.2. MicroRNAs involved in Metabolism

9.7. Role of MicroRNAs in Diseases
- 9.7.1. MicroRNA in Tumorogenesis
- 9.7.2. MicroRNAs in Obesity, Diabetes and Cardiovascular Diseases

9.8. Gene Variants that Generate or Destroy Binding Sites for MicroRNAs
- 9.8.1. Main Studies
- 9.8.2. Results in Human Diseases

9.9. MicroRNA Detection and Purification Methods
- 9.9.1. Circulating MicroRNAs
- 9.9.2. Basic Methods Used

Module 10. Current Market State

10.1. DTC (Direct-to-Consumer) Tests
- 10.1.1. Pros and Cons
- 10.1.2. Myths of Early DTCs

10.2. Quality Criteria for a Nutrigenetic Test
- 10.2.1. SNP Selection
- 10.2.2. Interpretation of Results
- 10.2.3. Laboratory Accreditations

10.3. Health Professionals
- 10.3.1. Training Needs
- 10.3.2. Criteria of Professionals Applying Genomic Nutrition

10.4. Nutrigenomics in the Media

10.5. Integration of Evidence for Personalized Nutritional Counseling

10.7. Critical Analysis of the Current Situation

10.8. Discussion Work

10.9. Conclusions, Use of Nutritional Genomics and Precision Nutrition as Prevention

A 100% online program that will allow you to keep up to date in the application of nutritional genomics in the prevention of diseases"

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

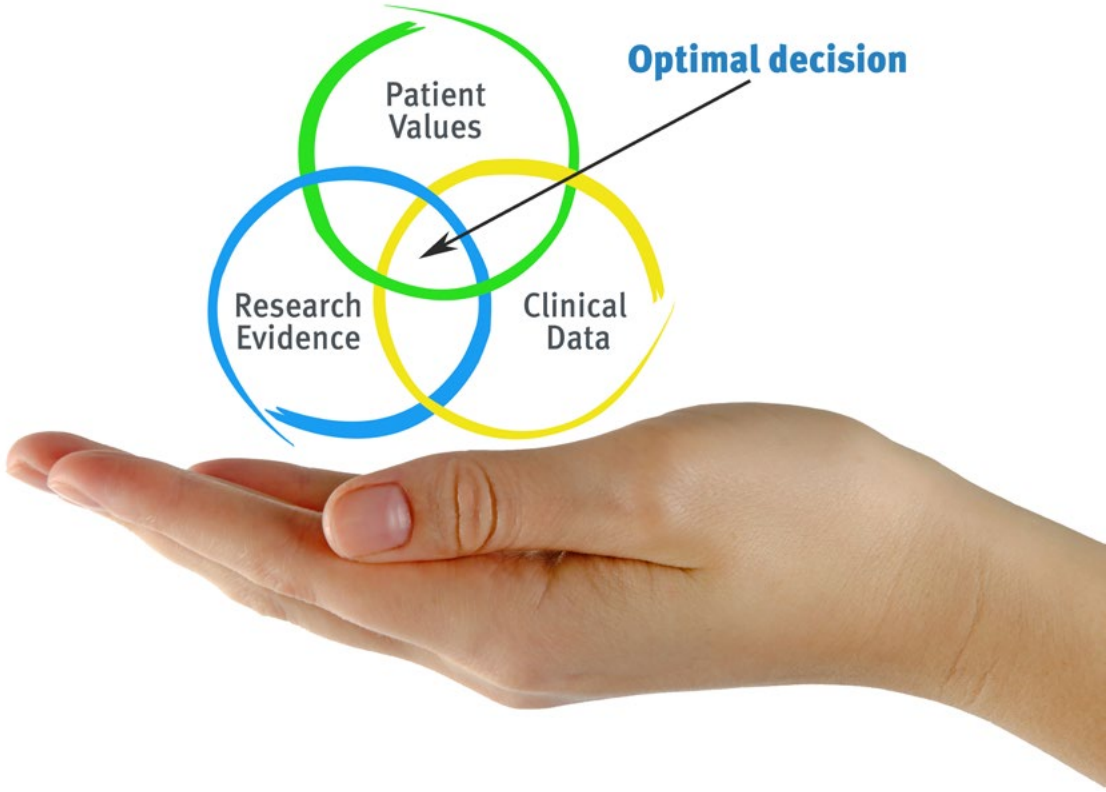
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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 be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly 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, attempting to recreate the actual conditions in a pharmacist's professional 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:

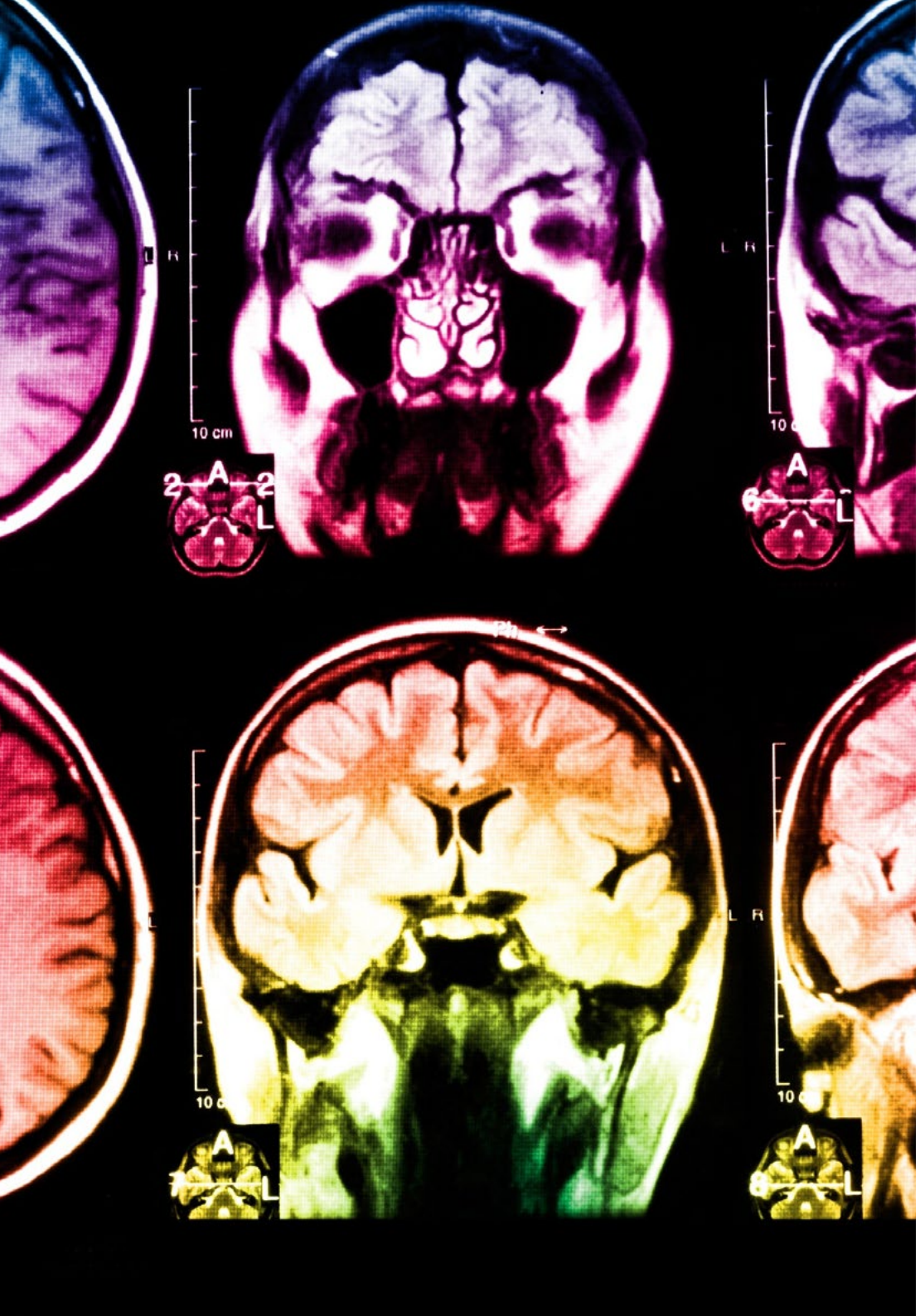
1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts 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.

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.

Pharmacists 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 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic 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 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 created specifically for the course by specialist pharmacists who will be teaching the course, so that the educational development is highly specific and accurate.

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.

Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.

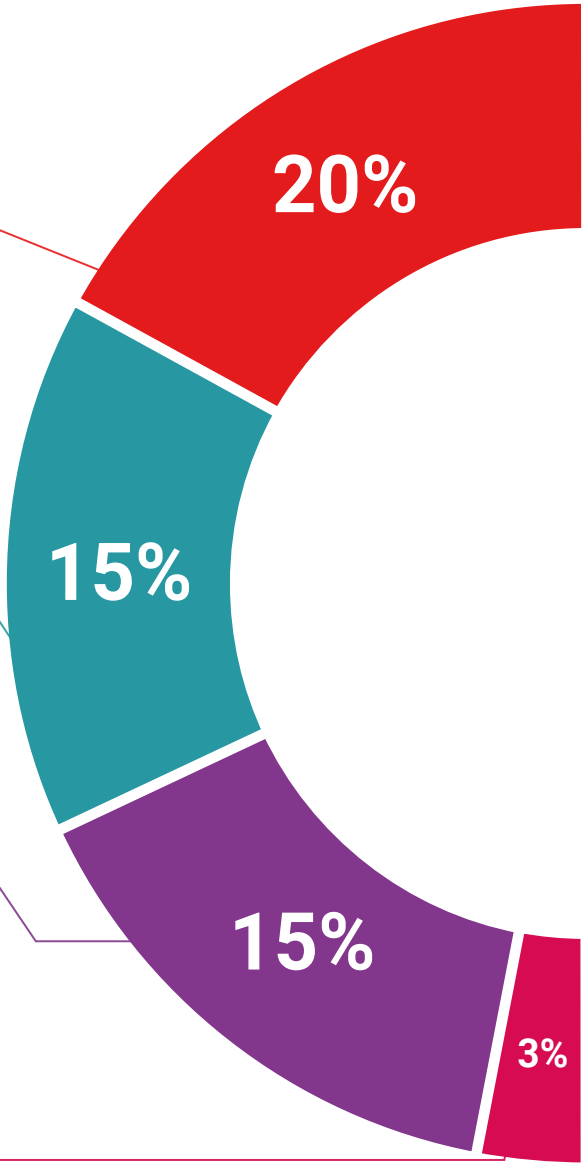
Interactive Summaries

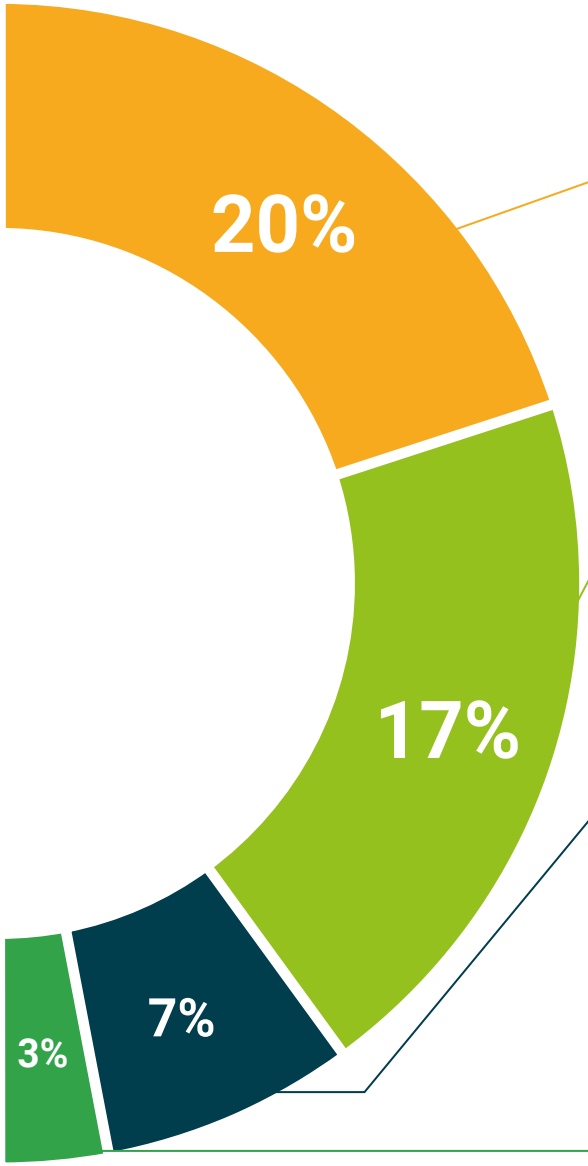
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training 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, 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 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.

07

Certificate

The Master's Degree in Genomics and Precision Nutrition guarantees you, in addition to the most rigorous and up-to-dated education, access to a Master's Degree issued by TECH Global University.

Successfully complete this program and receive your university qualification without travel or laborious paperwork"

This private qualification will allow you to obtain a **Master's Degree diploma in Nutritional Genomics and Precision Nutrition** 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** private qualification 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: **Master's Degree in Nutritional Genomics and Precision Nutrition**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**

tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Master's Degree in Nutritional Genomics and Precision Nutrition

This is a private qualification of 1,800 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
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

Master's Degree in Nutritional Genomics and Precision Nutrition

General Structure of the Syllabus

Subject type	ECTS credits
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Introduction Nutritional Genomics and Precision Nutrition	6	CO
1º	Laboratory Techniques for Nutritional Genomics	6	CO
1º	Biostatistics for Nutritional Genomics	6	CO
1º	Nutrigenetics I	6	CO
1º	Nutrigenetics II - Key Polymorphisms	6	CO
1º	Nutrigenetics III	6	CO
1º	Nutrigenomics	6	CO
1º	Metabolomics-Proteomics	6	CO
1º	Epigenetics	6	CO
1º	Current Market State	6	CO

Dr. Pedro Navarro Illana
Rector

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*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.

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Master's Degree
Nutritional Genomics and Precision Nutrition

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Master's Degree

Nutritional Genomics and Precision Nutrition

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