

# Internship Program

## Genomic and Precision Nutrition for Nursing



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Internship Program  
Genomic and Precision  
Nutrition for Nursing

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# 01 Introduction

Advances in science and technology have led to an understanding of how nutrition affects gene expression in humans. As a result, nutrition experts have designed increasingly personalized meal plans. In the nursing field, it is important to be updated on the latest research on susceptibility genes and polymorphisms related to diseases such as diabetes in order to provide more accurate and personalized care to patients. That is why TECH offers this Internship Program, which consists of an intensive stay in a prestigious hospital center where nursing professionals will learn the most advanced techniques of personalized nutrition, which will allow them to design individualized food plans for their patients.



*Update yourself with this Internship Program and integrate into your daily practice the most advanced techniques in Genomic and Precision Nutrition"*





The latest advances in nutrition, based on scientific developments in the field of genetics, have led to the expansion of areas such as genomics. Thanks to this, it is possible to design dietary plans adapted to each patient, based on their genetic information. In this sense, it is essential that nursing professionals are updated on the latest research in aspects such as susceptibility genes and polymorphisms related to diseases such as diabetes.

For this reason, TECH offers this degree that will allow the professional to acquire the knowledge and skills necessary to implement personalized dietary plans in their patients, according to their genetic traits. This innovative academic modality consists of a face-to-face and intensive stay in a renowned hospital center, where you will be able to carry out the most advanced praxis in Genomic and Precision Nutrition.

Therefore, during this Internship Program, the student will assist in the interpretation of the genetic information of their patients in order to design personalized food plans that contribute to improve their health and prevent nutrition-related diseases. In addition, you will have the opportunity to work in a renowned hospital environment and learn about the latest techniques and tools in genomic and precision nutrition.



# 02

## Why Study an Internship Program?

This Internship Program is an intensive, hands-on educational program that offers nursing professionals a unique learning experience. With a totally practice-oriented approach, this program is composed of 120 hours of intensive preparation with a face-to-face stay in a renowned hospital center, which will allow you to learn first-hand the most advanced working technologies and the most modern care protocols.



*Take advantage of the unique opportunity provided by TECH and update yourself in a practical way thanks to this qualification"*

### 1. Updating from the latest technology available

With this Internship Program, the student will be able to catch up on the latest advances in Genomic Nutrition. And, for this, he will have the latest technology and the most advanced equipment, so that he will know first-hand the most accurate methods for nutritional guidelines for all types of patients.

### 2. Gaining In-Depth Knowledge from the Experience of Top Specialists

The large team of professionals that will accompany the nurse throughout the practical period is a first-class guarantee and an unprecedented guarantee of updating. With a specifically designated tutor, the student will be able to see real patients in a state-of-the-art environment, which will allow them to incorporate the most effective procedures and approaches in Nutrition into their daily practice.

### 3. Entering First-Class Clinical Environments

TECH carefully selects all available centers for Internship Programs. Thanks to this, the professional will have guaranteed access to a prestigious clinical environment in the area of Genomic and Precision Nutrition. In this way, you will be able to see the day-to-day work of a demanding, rigorous and exhaustive sector, always applying the latest theses and scientific postulates in its work methodology.

#### 4. Putting the acquired knowledge into daily practice from the very first moment

The academic market is plagued by teaching programs that are poorly adapted to the daily work of the Communication Management and that require long teaching hours, often not very compatible with personal and professional life. TECH offers a new learning model, 100% practical, that allows you to get in front of state-of-the-art procedures in the field of Genomic Nutrition and, best of all, put it into professional practice in just 3 weeks.

#### 5. Expanding the Boundaries of Knowledge

TECH offers the possibility of doing this Internship Program, not only in national, but also in international centers. This way, Communication Management be able to expand their frontiers and catch up with the best specialists, who practice in first class centers and in different continents. A unique opportunity that only TECH, the largest online university in the world, could offer.



*You will have full practical immersion  
at the center of your choice"*

# 03

## Objectives

The main objective of this program is to provide nursing professionals with the necessary tools and knowledge to personalize dietary plans for their patients. Through a practical methodology focused on hospital experience, participants will develop advanced skills in genomic and precision nutrition. They will also learn to assist in the interpretation and application of the most recent studies on susceptibility genes and polymorphisms related to diseases such as diabetes.



### General Objectives

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- ♦ To acquire theoretical knowledge of human population genetics and also of genomic and precision nutrition in order to be able to apply it in clinical practice
- ♦ To learn about the trajectory of this innovative field and the key studies that contributed to its development
- ♦ To know in which pathologies and conditions of human life Genomic and Precision Nutrition can be applied
- ♦ to assess individual response to nutrition and dietary patterns in order to promote health and prevent disease







## Specific Objectives

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- ♦ 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
- ♦ Understand the techniques used in Nutritional Genomics Studies
- ♦ To master the latest advances in omics and bioinformatics techniques
- ♦ To acquire the necessary knowledge to correctly design experimental studies in the fields of nutrigenomics and nutrigenetics
- ♦ Delve into statistical models for clinical studies in humans
- ♦ To examine the state-of-the-art 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
- ♦ To present the key polymorphisms to date related to human nutrition and metabolic processes that the professional needs to know and those related to complex diseases
- ♦ To assess the key studies that support these polymorphisms and the debate, in the cases that exist
- ♦ To delve into the new cutting-edge concepts of Nutrigenetics research
- ♦ To delve into the differences between Nutrigenetics and Nutrigenomics
- ♦ To Evaluate the genes related to metabolic processes affected by Nutrition
- ♦ Know the Principles of Metabolomics and Proteomics
- ♦ To delve into the Microbiota as a Tool for Preventive and Personalized Nutrition
- ♦ Exploring the Basis of the Relationship between Epigenetics and Nutrition
- ♦ To present and discuss how MicroRNAs are involved in genomic nutrition and its other applications for society
- ♦ Reflect on and analyze past and present cases and anticipate future market developments in the field of Nutritional Genomics

# 04

## Educational Plan

This Internship Program consists of a 3-week practical internship in a prestigious center, from Monday to Friday, with 8 consecutive hours of practical training with an experienced and specialized professional. This stay will allow the student to see real patients alongside a reference team in the field of Genomic and Precision Nutrition Nursing.

In this completely practical Internship Program, the activities are aimed at developing and perfecting the skills necessary to provide healthcare care in areas and conditions that require highly qualified professionals, and are oriented towards specific expertise for practicing the activity, in a safe environment for the patient and with highly professional performance.

The internship will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for Nursing praxis (learning to be and learning to relate).

The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:



*Receive specialized education in an institution that can offer you all these possibilities, with an innovative academic program and a human team that will help you develop your full potential"*

Module	Practical Activity
<b>Techniques Advanced Laboratory Techniques in Genomic and Precision Nutrition</b>	Assist in the extraction and sequencing of DNA from patients with severe metabolic conditions or nutrient absorption problems to evaluate their causes
	Introduce omics technologies and their biomarkers to study the metabolic behavior of patients with nutritional requirements
	Use Microfluidic Cards to channel and address DNA microarrays in search of gene or genomic expression of a nutritional condition
	Correctly interpret and analyze biostatistical results collected in genetic analysis of patients with special nutritional requirements for genetic analysis of patients with special nutritional requirements in order to make the best medical making better medical decisions
<b>New perspectives on Nutrigenomics</b>	Assist in promoting the interaction of specific genes with different nutritional elements
	To generate and monitor changes in cellular metabolism and metabolic profiles, aimed at preventing, alleviating and/or improving the prognosis of different diseases in which the nutritional factor is an important element in their etiopathogenesis
	Develop individualized dietary recommendations in order to increase the effectiveness of nutritional plans
<b>Nutrigenetics and its main advances</b>	Examine the specific polymorphisms that anticipate the patient's possible obesity and act on them
	Identify genes that express addiction conditioning and address them through individualized strategies for each patient
	To recognize the genetic polymorphisms related to Type II Diabetes and to establish a specific diet and life habits in the patient against this disease
	Verify the genes that show evidence of a food allergy or intolerance and influence the patient to consciously avoid ingesting it
<b>Advanced products that support Precision Nutrition</b>	To assist in the indication to patients with vitamin deficiencies of algae-based antioxidant supplements, which demonstrate similar biological functions to vitamin E
	Understand how specific foods have changed the patient's gene expression, as in the case of higher salt intake in patients with early onset hypertension
	Detect new nutrients with similar benefits to other frequently ingested nutrients
	Predicting responses to new nutrients or foods from patients with specific dietary pathologies



# 05

## Where Can I Do the Internship Program?

TECH offers a wide range of options of clinical, hospital and scientific centers where students can carry out their internships. These centers have been carefully selected for their excellence in the field of nutrition and their commitment to updating nursing professionals. Students will have the opportunity to work with state-of-the-art technologies and modern care protocols in a real patient care setting. This real-world, hands-on experience will help students gain valuable skills and knowledge for their future career.

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*The most prestigious clinical centers will be at your disposal thanks to this Internship Program. Take advantage of the opportunity and enroll”*







The student will be able to do this program at the following centers:

**Nursing****Hospital HM Regla**

Country	City
Spain	León

Address: Calle Cardenal Landázuri, 2,  
24003, León

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Update on Psychiatric Treatment in Minor Patients

**Nursing****Hospital HM Nou Delfos**

Country	City
Spain	Barcelona

Address: Avinguda de Vallcarca, 151,  
08023 Barcelona

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Aesthetic Medicine
- Clinical Nutrition in Medicine

**Nursing****Hospital HM Nuevo Belén**

Country	City
Spain	Madrid

Address: Calle José Silva, 7, 28043, Madrid

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- General and Digestive System Surgery
- Clinical Nutrition in Medicine

**Nursing****Policlínico HM Distrito Telefónica**

Country	City
Spain	Madrid

Address: Ronda de la Comunicación,  
28050, Madrid

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Optical Technologies and Clinical Optometry
- General and Digestive System Surgery

**Nursing****Policlínico HM Gabinete Velázquez**

Country	City
Spain	Madrid

Address: C. de Jorge Juan, 19, 1° 28001,  
28001, Madrid

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Clinical Nutrition in Medicine
- Aesthetic Plastic Surgery

**Nursing****Policlínico HM Las Tablas**

Country	City
Spain	Madrid

Address: C. de la Sierra de Atapuerca, 5,  
28050, Madrid

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Nursing in the Traumatology Service
- Diagnosis in Physiotherapy

**Nursing****Policlínico HM Moraleja**

Country	City
Spain	Madrid

Address: P.º de Alcobendas, 10, 28109,  
Alcobendas, Madrid

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Rehabilitation Medicine in Acquired Brain Injury Management

**Nursing****Policlínico HM Sanchinarro**

Country	City
Spain	Madrid

Address: Av. de Manoteras, 10,  
28050, Madrid

Network of private clinics, hospitals and specialized centers  
distributed all over the Spanish geography.

**Related internship programs:**

- Gynecological Care for Midwives
- Nursing in the Digestive Tract Department

# 06

## General Conditions

### Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

For this purpose, this educational entity undertakes to take out a liability insurance policy to cover any eventuality that may arise during the stay at the internship center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

**1. TUTOR:** During the Internship Program, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor, whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Internship Program, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Internship Program will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** The Internship Program shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Internship Program. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Internship Program will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

# 07 Certificate

This **Internship Program in Genomic and Precision Nutrition for Nursing** contains the most complete and up-to-date program in the professional and academic landscape.

After the student has passed the assessments, they will receive their corresponding Internship Program diploma issued by TECH Technological University via tracked delivery\*.

The certificate issued by TECH will reflect the grade obtained in the test.

Title: **Internship Program in Genomic and Precision Nutrition for Nursing**

Duration: **3 weeks**

Course Modality: **Monday to Friday, 8-hour consecutive shifts**

Total Hours: **120 h. of professional practice**







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