

Postgraduate Certificate

Genetics, Precision Medicine and Asthma



Postgraduate Certificate Genetics, Precision Medicine and Asthma

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/medicine/postgraduate-certificate/genetics-precision-medicine-asthma

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01

Introduction

Allergic diseases are becoming a non-infectious epidemic worldwide. Nearly 150 million Europeans suffer from one of these pathologies, impairing their quality of life in different areas such as the physical, psychological or emotional. In this sense, asthma is one of the prevalent conditions characterized by the presence of dyspnea, chest pressure and torso, affecting patients in different ways, making it essential to approach its symptoms from a patient-focused perspective. Thus, reviewing the genetic aspects of asthma, as well as targeted treatments for a specific population, lays the foundation for effective treatment and ensures the improvement of those affected.





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Studying in-depth the genetic complexity of asthma helps improve patient treatments”

Asthma is a disease that cannot be cured, and its symptoms are controlled by means of medications such as glucocorticoids, an agent that modulates the inflammatory process. Unfortunately, not all patients react in the same way to this component, due to different causes. This is where Precision Medicine and the field of Genetics come into play. Many researchers have detected that, in severe cases, the ideal is to have a differentiated and precise diagnosis.

Thus, the Postgraduate Certificate in Genetics, Precision Medicine and Asthma focuses on the genetic aspects of the disease, biological treatments aimed at a specific population and the current and future biomarkers that will make it possible to determine the different phenotypes involved in the development of the disease. In addition to all this, there is the excellent professional team behind the development of the classes, which has extensive experience in this field of medicine.

As you progress through the lectures, you will have a broader view of the genetic complexity of asthma, and by the end of the course you will have identified the different therapeutic targets and the clinical use that can be made of them.

This program is conducted in a 100% online mode, so the student will have the ease of being able to do it at the time that best suits him, without having to pause their daily activities to attend a class. All you need is a device with internet access to start catapulting your career in an area of work that is in high demand internationally.

This **Postgraduate Certificate in Genetics, Precision Medicine and Asthma** 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 Postgraduate Diplomas in Genetics, Precision Medicine and Asthma
- ♦ 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 to perform the self-assessment process to improve the learning process
- ♦ 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



This training will provide you with a sense of security in medical practice, which will help you grow personally and professionally”

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There are some cases of patients with Asthma that require a precise and personalized diagnosis, requiring professionals to continue their academic growth in Precision Medicine"

The program's teaching staff includes professionals from the sector who contribute their work experience to this training 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 training programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

Broaden your career field with a 100% online program and learn with the best in this area of medicine.

Through innovative methodologies, students learn in a theoretical-practical environment and develop their skills thanks to the knowledge of the faculty.



02 Objectives

In order to analyze, understand and acquire new knowledge, it is important to have a program that helps students to specialize in an interactive and practical way. Consequently, the development of this curriculum will boost not only the students' careers, but will provide them with a broader picture of this field of Genetics, Precision Medicine And Asthma-focused Precision Medicine. To this end, TECH establishes a series of general and specific objectives for the greater satisfaction of the future graduate, those being the following:





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Optimize your knowledge by following a dynamic learning process developed by professionals in genetics and precision medicine"



General Objectives

- Provide in-depth knowledge on the genetic linkage of respiratory diseases
- Interpret and generate knowledge with the information provided by primary and secondary sources in the area of Genetics
- Improve evaluation for prognosis and prevention of respiratory diseases.
- Understand the precision treatment of pulmonary pathology in the daily practice of medicine
- Acquire a solid knowledge of the different pulmonary pathologies and their genetic basis





Specific Objectives

- Genetics, Precision Medicine and Asthma
- Study in depth the epidemiological associations of asthma that suggest a genetic basis of the disease
- Explore the genetic complexity of asthma in the light of the most current asthma ascites
- Master the biology, therapeutic targets and clinical use of precision treatments in asthma



Achieve your career goals by learning from the best in the medical field"

03

Course Management

Pursuing excellence and providing an education that meets the high standards of the market, TECH has a highly qualified faculty with extensive work and research experience in the field of Genetics, Precision Medicine and Asthma. For this reason, they accompany the student at all times and provide the necessary tools for the development of their capabilities. In this way, the professional has the guarantees required to specialize at an international level in a booming sector that will catapult him/her to professional success.



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*Specialize in a booming sector
with high international demand and
ensure your professional success”*

Management



Dr. Puente Maestu, Luis

- Professor of Pneumology, Department of Medicine, Universidad Complutense de Madrid
- Chief of the Pneumology Department of the Hospital General Universitario Gregorio Marañón
- Degree in Medicine from the Complutense University of Madrid
- Specialist in Pneumology, Complutense University of Madrid
- Doctor *Cum Laude* in Medicine from the Complutense University of Madrid
- Master's Degree in Design and Statistics in Health Sciences from the Autonomous University of Barcelona
- University Master's Degree in Senior Management of Health Services and Business Management of the University of Alcalá



Dr. De Miguel Díez, Javier

- Section Chief and Resident Tutor in the Pneumology Department of the Hospital General Universitario Gregorio Marañón
- PhD in Medicine and Surgery from the Autonomous University of Madrid
- Master's Degree in Healthcare Management
- University Master's Degree in Smoking
- Master's Degree in Advances in Diagnosis and Treatment of Airway Disease
- Postgraduate Master's Degree in Advances in Diagnosis and Treatment of Sleep Disorders
- Master's Degree in Advances in Diagnosis and Treatment of Diffuse Interstitial Lung Diseases
- Master in Pulmonary Hypertension and Master in Thrombotic Pathology

Professors

Dr. de Castro Martínez, Francisco Javier

- ♦ Physician in charge of the Difficult to Control Asthma Consultation in the Allergology Department of the Hospital General Universitario Gregorio Marañón
- ♦ Physician in charge (in collaboration with the Pneumology Department) of the monographic consultation of Asthma at the Hospital General Universitario Gregorio Marañón
- ♦ Physician Assistant (F.E.A. Allergist) at Hospital General Universitario Gregorio Marañón
- ♦ On-call Internal Medicine as an attending physician in the Emergency Department of the Gregorio Marañón Hospital
- ♦ Degree in Medicine and Surgery. University of Granada
- ♦ Allergology training at the Hospital General Universitario Gregorio Marañón
- ♦ PhD program in Immunology from the Department of Medicine of the Complutense University of Madrid
- ♦ Postgraduate Certificate in Electrocardiogram in Emergencies. Gregorio Marañón General University Hospital
- ♦ Postgraduate Certificate in Diagnostic and Therapeutic Protocols in Emergency Medicine. Gregorio Marañón General University Hospital

Dr. Zambrano Ibarra, Gabriela

- ♦ Allergist Physician Hospital General Universitario Gregorio Marañón
- ♦ Allergist Physician Hospital del Tajo
- ♦ Allergist Physician Hospital del Fuenlabrada
- ♦ Research activity: retrospective observational study in routine clinical practice of the immunological follow-up of treatment with high-dose modified allergens in patients with rhinoconjunctivitis and/or asthma sensitized to Phleum pratense, Olea e, Platanus a, Cupressus arizonica and Salsola k pollens using objective biological parameters. Tagus-Aranjuez Hospital
- ♦ Research activity: biological standardization of Cupressus arizonica allergenic extract to determine the biological activity in Histamine Equivalent Units (HEP)
- ♦ Research activity: prospective study to evaluate the quality of life with its determinants such as adherence to treatment and satisfaction with immunotherapy in patients with rhinoconjunctivitis with or without asthma, sensitized to at least one aeroallergen. Laboratorios Bial-Arístegui,S.A

04

Structure and Content

The content structure for this Postgraduate Certificate in Genetics, Precision Medicine and Asthma has been developed following the basics that this medical specialty requires to meet the demands of the labor market. From the first class to the last, it has the approval of the teaching staff specialized in the field of precision medicine, allowing all students to broaden their knowledge to later apply it in any national or international work environment.





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With a curriculum updated to market demands, this Postgraduate Certificate in Genetics, Precision Medicine And Asthma seeks to broaden the knowledge of its students”

Module 1: Genetics, Precision Medicine and Asthma

- 1.1. Epidemiology of Asthma
 - 1.1.1. Family, Racial or Gender Associations
 - 1.1.2. Twin Studies
- 1.2. Asthma-Related Genes
 - 1.2.1. Location 1
- 1.3. Asthma-Associated Genes
 - 1.3.1. Location 2
- 1.4. Inflammatory Pathways in Asthma
- 1.5. Precision Medicine in Asthma
 - 1.5.1. Anti IgE Antibodies
- 1.6. Precision Medicine in Asthma
 - 1.6.1. Anti-IL5 or Anti-IL5 Receptor Antibody
- 1.7. Precision Medicine in Asthma
 - 1.7.1. Anti-IL4/IL13 Antibodies
- 1.8. Precision Medicine and Other Biological Treatments in Asthma
 - 1.8.1. Anti-IL9, Anti-TNFalpha, Anti T-Lymphocyte Antibodies
- 1.9. Precision Medicine
 - 1.9.1. Current and Future Biomarkers
- 1.10. Precision Medicine in Asthma
 - 1.10.1. Linking Phenotypes to Specific Treatments





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Strengthen your knowledge of genetics and the field of Precision Medicine with a program designed by the best experts in the field"

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.



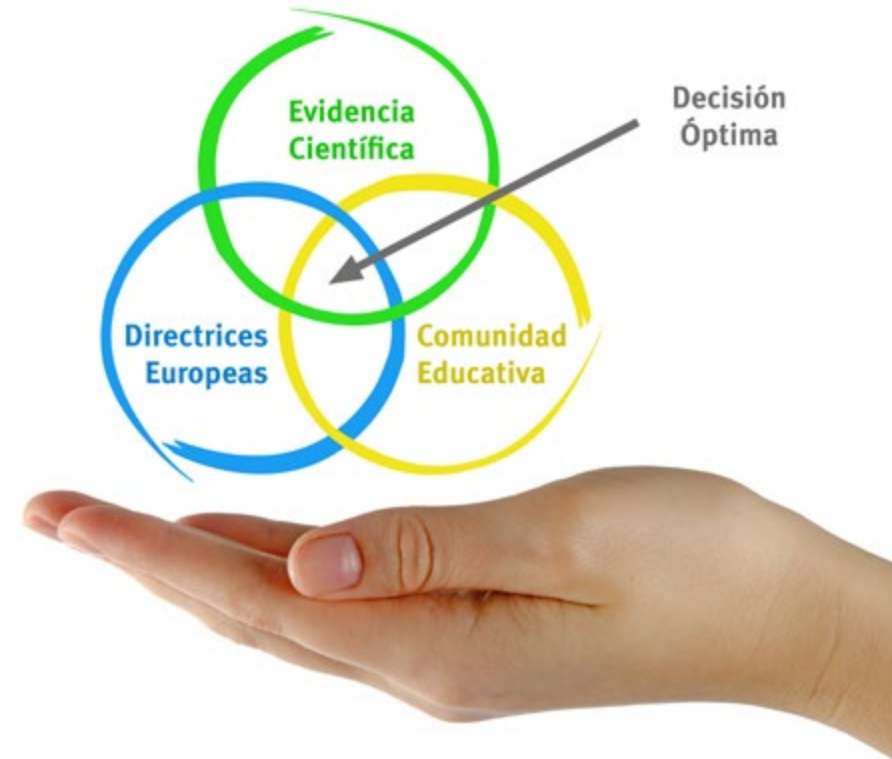
“

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 Genetics, Precision Medicine and Asthma guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.



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Successfully complete this training and receive your diploma without the hassle of travel or paperwork"

This **Postgraduate Certificate in Genetics, Precision Medicine and Asthma** contains the most complete and up-to-date scientific program on the market.

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

The diploma issued by TECH Technological University will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Genetics, Precision Medicine and Asthma**

Official N° of Hours: **150 h.**



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

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



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