

Postgraduate Certificate

Fetal and Newborn Immunology





Postgraduate Certificate Fetal and Newborn Immunology

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

Website: www.techtute.com/us/medicine/postgraduate-certificate/fetal-newborn-immunology

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01

Introduction

During gestation, the fetus is protected by the placental barrier and receives maternal antibodies through placental transfer, providing temporary protection against certain diseases. At birth, the baby's immune system is immature and relies heavily on these passive defenses, although it will eventually begin to produce its own antibodies and develop its ability to defend itself against pathogens. This process is crucial for the baby's health and well-being during its first months of life. In this context, TECH has deployed a holistic, fully digital and highly flexible program, with content accessible from any web-connected device, from any corner, at any time. All supported by the innovative Relearning methodology.



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This 100% online Postgraduate Certificate will allow you to explore the transfer of maternal antibodies, the role of the placenta in fetal protection and the evolution of the neonatal immune system”

Fetal and Newborn Immunology is a crucial field that requires an understanding of the immunological mechanisms unique to these early stages of life. Furthermore, it is essential for improving maternal and infant health care, preventing disease and promoting healthy development in infants. Therefore, it is recommended that health professionals are constantly updated in this important area of neonatal care.

This is how this Postgraduate Certificate was born, which will explore in depth the development of the immune system during gestation, from embryo implantation to delivery, understanding how it evolves and adapts to protect the fetus in an intrauterine environment. In addition, the formation of the components of the fetal immune system will be analyzed, including the production of specialized cells and antibodies, which contribute to the defense of the fetus against potential pathogens.

The specific immunological mechanisms that come into play during the neonatal period, when the newborn faces new immunological challenges as it adapts to the extrauterine environment. This will include analyzing how the neonatal immune system responds to exposure to microorganisms and the formation of active immunity.

Finally, the course will develop practitioners' skills in immunological assessment of the newborn, equipping them with the knowledge to evaluate neonatal immune function and recognize immunological deficiencies that require medical intervention.

Considering this, the program will be optimally adapted to the contemporary demands of online specialization, using the Relearning educational methodology to enhance students' effectiveness and autonomy. In fact, this modality will allow them to access the content from any place and at any time, offering flexibility and flexibility of access. Therefore, students will be free to manage their academic resources according to their individual schedules and needs, which will enrich their educational experience.

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

- ♦ The development of case studies presented by experts in fetal and newborn immunology
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



Take advantage of this unique TECH opportunity! With this Postgraduate Certificate you will delve into the complex mechanisms that regulate the immune response during the earliest stages of life"

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You will evaluate the immunological implications of maternal-fetal exchange, as well as the possible immunological consequences of Intrauterine Infections, all through an extensive library of multimedia resources”

The program's teaching staff includes professionals from the field who contribute their work experience to this educational 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will be prepared to meet the clinical and research challenges in the field of perinatal and neonatal immunology, therefore contributing to the advancement of maternal and infant health care.

You will delve into the specific immunological mechanisms that come into play during the neonatal period, addressing the crucial adaptations that the immune system undergoes in the first days and weeks of life.



02

Objectives

The objectives of this Postgraduate Certificate are multiple and range from a thorough understanding of the immunological processes during gestation and the neonatal period, to the ability to apply that knowledge in clinical practice and research. Therefore, this academic degree will provide professionals with a solid foundation in the fundamental principles of fetal and neonatal immunology, enabling them to critically analyze the development of the immune system in these early stages of life.



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You will analyze in depth the formation of specific components of the fetal immune system, as well as the unique immunological mechanisms that operate during the neonatal period”



General Objectives

- Understand the key aspects of early neonatal assessment
- Analyze the anatomic and physiologic conditions of the neonate
- Master appropriate neonatal admission and transport procedures
- Determine neonatal resuscitation and thermal management techniques
- Develop strategies to prevent and treat hypothermia and pain
- Investigate neonatal respiratory and cardiovascular pathologies
- Address neurological and metabolic disorders in neonatology
- Define infections and hematologic disorders in neonatology
- Evaluate renal and neonatal immunity disorders
- Apply new technologies to improve neonatal care





Specific Objectives

- Delve into the development of the immune system during pregnancy
- Analyze the formation of components of the fetal immune system
- Determine the specific immunological mechanisms in the neonatal period
- Evaluate maternal-fetal exchange and its immunological implications
- Define the immunologic consequences of intrauterine infections
- Develop the immunological assessment of the newborn in depth



You will equip yourself with the skills necessary to assess and address specific immunological problems that may arise during pregnancy, childbirth and the neonatal period”

03

Course Management

The faculty behind this university program are highly qualified and dedicated experts in the field of maternal and child health. In fact, these professionals have extensive clinical and research experience, which enables them to provide a comprehensive and up-to-date perspective on the complex immunological processes that occur during gestation and the neonatal period. In addition, they are able to effectively transmit theoretical and practical knowledge to graduates, fostering critical thinking and problem solving in a dynamic educational environment.





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The faculty of this Postgraduate Certificate is committed to academic excellence with improving maternal and child health care, fundamental to your professional development”

Management



Dr. Baca Cots, Manuel

- ♦ Head of the Pediatrics and Neonatology Service at Hospital Quirón Málaga
- ♦ Head of Neonatology at Hospital Clínica Dr. Gálvez
- ♦ Head of Neonatology at Hospital Qurón of Murcia
- ♦ Head of Andalusian Health Service (SAS)
- ♦ Lead researcher of international multi-center projects
- ♦ Degree in Medicine from the University of Granada

Professors

Dr. Gómez Rigal, José

- ♦ Head of the Immunology Service at the University Clinical Hospital of Santiago de Compostela
- ♦ Director of the Immunogenetics Laboratory
- ♦ Coordinator of the GENVIP Vaccine Research Group
- ♦ External Advisor of the Spanish Association of Pediatrics
- ♦ Auditor for the European Federation of Immunogenetics
- ♦ Member of the Committee of Experts in Precision Oncology of the Autonomous Community of Galicia



04

Structure and Content

This Postgraduate Certificate will cover a wide range of topics crucial to understanding the complex interaction between the immune system and prenatal and neonatal development. Therefore, the course contents will include a detailed analysis of the development of the immune system during gestation, exploring how it evolves and adapts to provide protection to the developing fetus. The formation of specific components of the fetal immune system and the unique immune mechanisms that operate during the neonatal period will also be discussed.





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You will cover aspects such as maternal-fetal exchange, immunologic consequences of intrauterine infections, and comprehensive immunologic assessment of the newborn”

Module 1. Fetal and Newborn Immunology

- 1.1. Development of the Immune System
- 1.2. Formation of the Various Components of the Immune System
- 1.3. Immunological Mechanisms Specific to this Time of Life
- 1.4. Maternal-Fetal Exchange
- 1.5. Immunologic Consequences of Intrauterine Infections
- 1.6. Immunological Assessment of the Newborn
- 1.7. Congenital Syndromes of Humoral Immunodeficiencies
- 1.8. Congenital Cell-Mediated Immunodeficiency Syndromes
- 1.9. The Pregnant Woman, the Fetus and Vaccines
- 1.10. The Application of New Technologies to this Field of Perinatology.





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Thanks to this Postgraduate Certificate, you will gain a solid foundation for understanding and addressing clinical and research challenges in the field of maternal and child health”

05

Methodology

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

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



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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gervas, 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

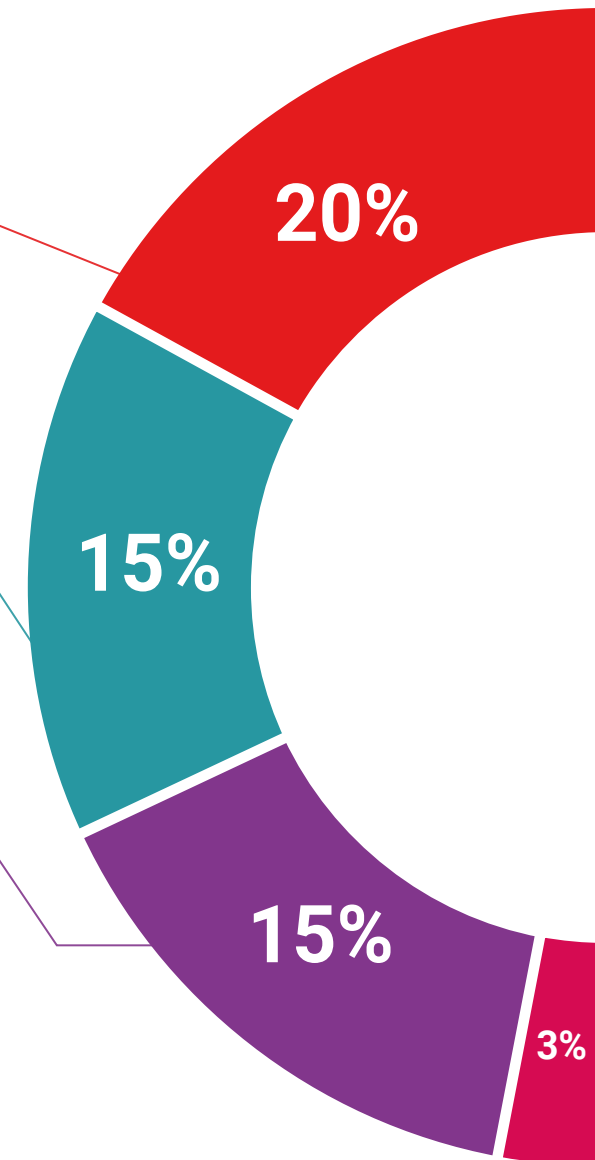
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

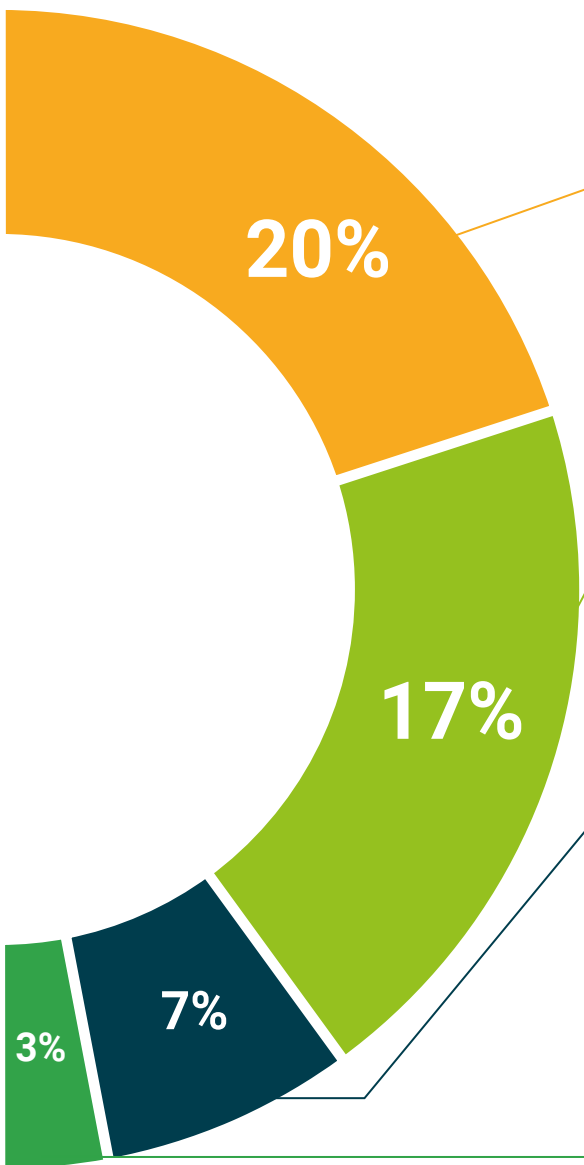
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 Fetal and Newborn Immunology guarantees, in addition to the most accurate and up-to-date knowledge, access to a Postgraduate Certificate issued by TECH Global University.





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Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This private qualification will allow you to obtain a **Postgraduate Certificate in Fetal and Newborn Immunology** 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: **Postgraduate Certificate in Fetal and Newborn Immunology**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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

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



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- » Schedule: at your own pace
- » Exams: online

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