

Postgraduate Certificate Respiratory Disorders in Neonatology





Postgraduate Certificate Respiratory Disorders in Neonatology

- » 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/respiratory-disorders-neonatology

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Study Methodology

p. 20

06

Certificate

p. 30

01

Introduction

Neonatology is a medical specialty dedicated to the care of newborns, especially those with health problems. Among the most common conditions in neonatology are respiratory disorders, which can be life-threatening to infants. For this reason, it is essential that health professionals are trained to detect, diagnose and treat these disorders effectively. In view of this, TECH has designed a program with the necessary tools to improve knowledge of diagnosis and treatment of respiratory disorders in neonatology. This program is 100% online and allows participants to organize their academic resources in a flexible way and to adapt their learning to their work pace and availability.



“

Do you want to improve your skills in the detection and treatment of respiratory disorders in newborns? This Postgraduate Certificate gives you access to multiple multimedia resources and the Relearning pedagogical methodology, so you can learn at your own pace and with flexibility"

Neonatology is a branch of medicine that focuses on the medical care of newborns, especially those born prematurely or with medical complications. Respiratory disorders are a leading cause of neonatal mortality and morbidity worldwide. For this reason, it is essential that health professionals are prepared to manage and treat these disorders effectively and quickly. In this context, the need arises for a program focused on Respiratory Disorders in Neonatology that provides comprehensive and updated training on respiratory pathologies in newborns.

TECH is aware that specialized care in Neonatology is essential for the successful treatment and survival of newborns. Respiratory Disorders in particular require specific care and management, and a multidisciplinary approach. Therefore, this Postgraduate Certificate in Respiratory Disorders in Neonatology TECH provides the opportunity to acquire specialized knowledge, skills and tools necessary to provide optimal care to newborns.

The program covers topics such as lung development, physiology, respiratory pathology, respiratory assistance and mechanical ventilation, noninvasive and invasive ventilation, oxygen administration, endotracheal intubation and extubation, among others. Participants will have the opportunity to learn from outstanding teachers in the field, as well as to use multimedia resources that will allow them to acquire practical and theoretical skills in the diagnosis, treatment and follow-up of Respiratory Disorders in Neonatology.

The program is 100% online and will be taught using the Relearning methodology, which encourages continuous learning and the active participation of students in their own training process. Participants will have access to updated and varied didactic resources, such as explanatory videos, clinical case simulations, practical activities and educational evaluations.

This **Postgraduate Certificate in Respiratory Disorders in Neonatology** 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 medical experts focused on Neonatology
- ♦ 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 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



Identify and treat Respiratory Disorders in Neonatology according to the latest clinical postulates thanks to this TECH Postgraduate Certificate"

“

With this Postgraduate Certificate you will obtain skills in the diagnosis and treatment of Respiratory Disorders in Neonatology, and you will have access to job opportunities in high level health institutions"

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.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

This program is the best option for health professionals who wish to improve their performance in the area of Neonatology.

You will learn about the most common respiratory disorders in newborns, develop clinical skills and be able to organize your academic resources in a flexible way with the Relearning pedagogical methodology.



02 Objectives

The study and understanding of Respiratory Disorders in Neonatology is fundamental for the adequate care and treatment of newborns with respiratory problems. For this reason, this Postgraduate Certificate aims to provide health care professionals with the necessary tools to deepen their knowledge of pulmonary pathophysiology, categorize and describe neonatal respiratory pathology, and develop skills in the use of oxygen therapy and neonatal monitoring. In addition, the program seeks to delve into the different modalities of respiratory assistance, so that students can be prepared to provide quality care to newborns with respiratory disorders.



“

If you want to secure your professional future in a specialized area of medicine, this program gives you the opportunity to develop your skills in respiratory support and mechanical ventilation in newborns”



General Objectives

- Delve into preterm neonates and their implications
 - Update knowledge of the indications for prevention in sick neonates
 - Be aware of the protocols that optimize the treatment of the sick neonate
 - Describe the main characteristics of the healthy newborn and its basic care
 - Systematize the main problems, disorders and diseases of the newborn, such as weight gain and metabolic development, prematurity, congenital malformations, respiratory or cardiac pathology, metabolic and blood disorders, or digestive or nutritional complications
 - List and describe the main common procedures in neonatology
 - Deepen in the therapeutic activities in the pathologies of the neonate
 - Delve into the basic and specific aspects of complementary examinations in this subspecialty and how to perform them
 - Investigate the knowledge of the different procedures of neonatal nutrition
 - Analyze the follow-up of the newborn once it has been controlled in the acute period
 - Illustrate and reflect on the different moments of care in the models of assistance to the newborn, both healthy and with pathology requiring hospital treatment
 - Explain the various systems of care for the sick neonate, delimiting the continuity between the neonatal period of acute illness and its subsequent follow-up
- Describe all the accompaniment that the technology means for the adequate monitoring and follow-up of these children, being able to be coupled to the various guides and protocols to finally obtain a global health concept
 - Deepen all the possibilities of on-site and even remote monitoring to achieve a very early and optimal performance on the impact of the disease on the neonate
 - Delve into all aspects of the concepts of complementary knowledge that allow understanding perinatology as a complete subspecialty, from the fetal period to long-term follow-up in outpatient clinics
 - Detail the parameters that will indicate the correct acquisition of all the developmental items of the various organs and apparatuses in order to obtain an optimal long-term result
 - Specify all the elements of the pathological conditions of the sick neonate in order to be able to establish work routines with results at the level of medical excellence



Specific Objectives

- ♦ Deepen in the pulmonary physiopathology
- ♦ Establish the categorization of Neonatal Respiratory Pathology
- ♦ Deepen in Oxygen Therapy
- ♦ Deepen the monitoring of neonates
- ♦ Describe the modalities of respiratory assistance



Acquire the necessary skills to meet the challenges of respiratory care and become a specialist in the field"

03

Course Management

TECH's management is focused on providing quality education to students who wish to specialize in Respiratory Disorders in Neonatology. The team of professionals hired is highly qualified and with extensive experience in the sector, will be responsible for guiding the student throughout the program, providing the best tools and resources for the development of their skills in the area. The objective is for students to obtain solid knowledge and elite training that will allow them to excel in the health field and open up new job opportunities at the national and international levels.



“

You will learn from outstanding professors and gain valuable skills for your career in the health area thanks to this Postgraduate Certificate in Respiratory Disorders in Neonatology"

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 Quirón of Murcia
- ♦ Head of Andalusian Health Service (SAS)
- ♦ Principal investigator of international multi-center projects
- ♦ Degree in Medicine from the University of Granada

Professors

Dr. Concheiro Guisán, Ana

- ♦ Head of the Pediatrics Department at Alvaro Cunqueiro de Vigo Hospital
- ♦ Coordinator of Clinical Teaching in the Degree in Medicine at the University Hospital Complex of Vigo
- ♦ Doctor of Medicine from the University of Barcelona
- ♦ Coordinator of the Rare Diseases and Pediatric Medicine Group of the Instituto de Investigación Sanitaria Galicia Sur (IISGS)
- ♦ Member of: Vice-President of the Galician Bioethics Council

Dr. Ruiz Ramos, María José

- ♦ Attending Pediatrician at Quirón Hospital
- ♦ Degree in Medicine from the University of Malaga, specializing in Pediatrics.



04

Structure and Content

The content of this program consists of various topics presented in a broad module, which delves into the development, embryology, anatomy and pulmonary physiology, as well as the respiratory pathology of the newborn. In addition, topics related to respiratory assistance and mechanical ventilation, noninvasive and invasive ventilation, oxygen administration, endotracheal intubation and extubation, and the impossible extubation process are addressed. All this will be taught by a team of highly qualified professionals with experience in the sector, with the aim of providing students with the best tools for their online training and professional development in the field of Neonatology.



“

With TECH's guidance, within this Postgraduate Certificate, students will be able to count on the necessary guarantees to achieve professional success in their careers"

Module 1. Respiratory Pathophysiology and Respiratory Disorders in Neonatology

- 1.1. Lung development, embryology, anatomy and physiology
 - 1.1.1. Lung development
 - 1.1.2. Embryology of the lung
 - 1.1.3. Physiology of the lung
 - 1.1.4. Extrauterine adaptation
- 1.2. Respiratory Pathology in Recent Newborns
 - 1.2.1. Acute Respiratory Failure
 - 1.2.2. Apneas
 - 1.2.3. Pulmonary Hypertension
 - 1.2.4. Chronic Pulmonary Hypertension
- 1.3. Respiratory Physiology and Mechanical Ventilation
 - 1.3.1. Indications
 - 1.3.2. Mechanical ventilation methods
 - 1.3.3. Complications
 - 1.3.4. Extubation
- 1.4. Non-Invasive Ventilation (NIV)
 - 1.4.1. Indications
 - 1.4.2. Non-invasive ventilation methods
 - 1.4.3. Complications
 - 1.4.4. Following Up
- 1.5. Invasive Ventilation
 - 1.5.1. Different pathologies
 - 1.5.2. Gasometric targets
 - 1.5.3. High Frequency Ventilation
 - 1.5.4. Results
- 1.6. Oxygen administration
 - 1.6.1. Indications
 - 1.6.2. Form of Administration
 - 1.6.3. Complications
 - 1.6.4. Following Up





- 1.7. Endotracheal Intubation
 - 1.7.1. Material and method for intubation
 - 1.7.2. Indications
 - 1.7.3. Care of intubated children
 - 1.7.4. Complications
- 1.8. Endotracheal extubation
 - 1.8.1. Material and method for extubation
 - 1.8.2. Shapes
 - 1.8.3. Care of extubated children
 - 1.8.4. Results
- 1.9. Impossible extubation process
 - 1.9.1. Attitude towards the child impossible to extubate
 - 1.9.2. Care of the chronically intubated child
 - 1.9.3. Other care of the child with tracheostomy
 - 1.9.4. Ondine syndrome
- 1.10. Cricothyroidotomy and tracheostomy
 - 1.10.1. Indications for tracheostomy
 - 1.10.2. Tracheostomy care
 - 1.10.3. Various pathologies and tracheotomy
 - 1.10.4. Home care

“Do you want to train in one of the most demanded medical specialties? This Postgraduate Certificate is for you! It offers you the opportunity to learn from outstanding teachers and with a Relearning methodology”

05 Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

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 assess 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.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

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

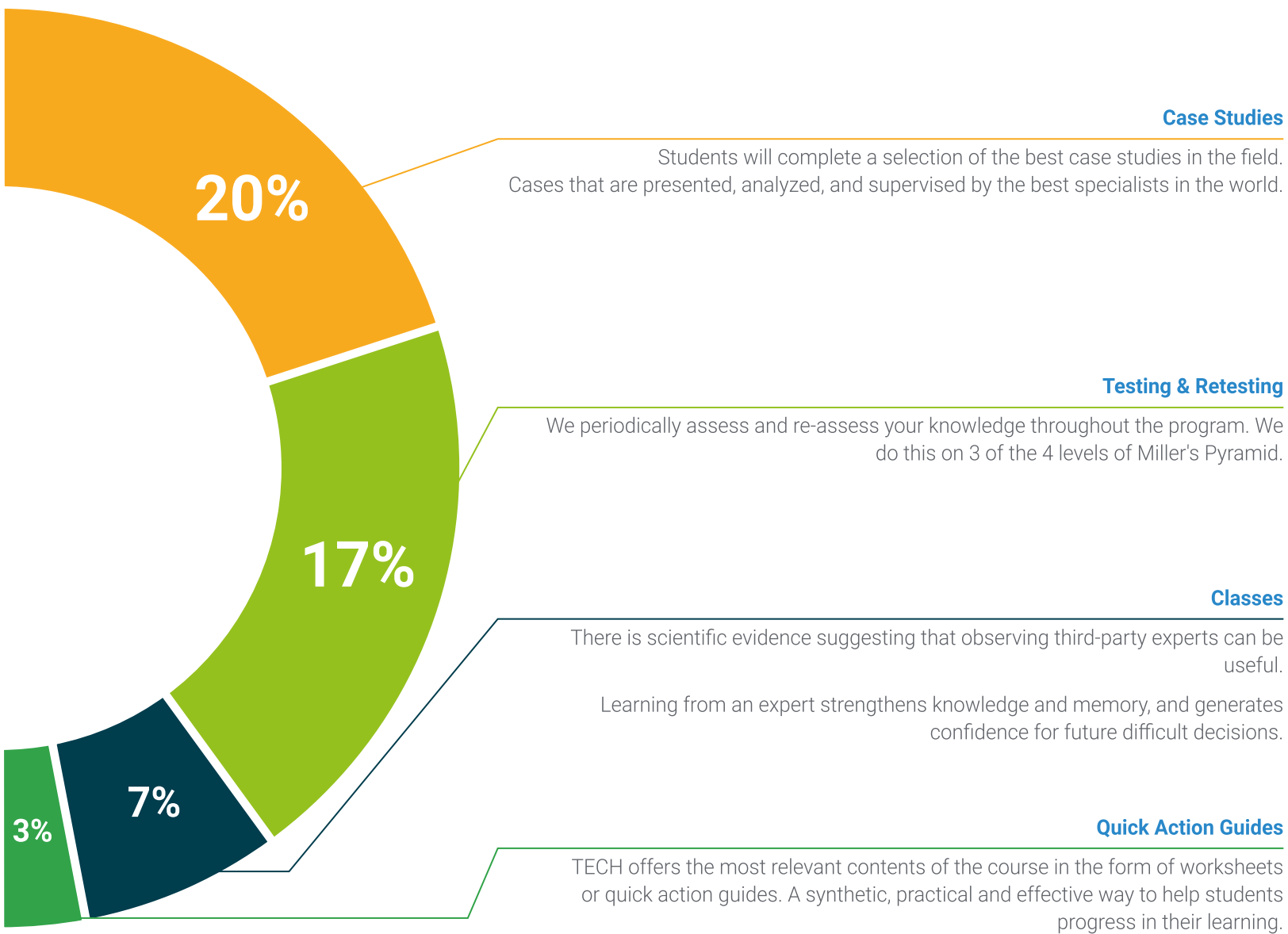
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





06 Certificate

The Postgraduate Certificate in Respiratory Disorders in Neonatology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

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 Respiratory Disorders in Neonatology** 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 Respiratory Disorders in Neonatology**

Modality: **online**

Duration: **6 Weeks**

Accreditation: **6 ECTS**





Postgraduate Certificate
Respiratory Disorders
in Neonatology

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

Postgraduate Certificate

Respiratory Disorders in Neonatology

