

Postgraduate Diploma

Advanced Techniques in Neonatology





Postgraduate Diploma Advanced Techniques in Neonatology

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

Website: www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-advanced-techniques-neonatology

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01

Introduction

Clinical and laboratory diagnostic techniques to study chromosomal alterations have allowed significant progress in the approach to neonatal patients with Dysmorphology. However, the detailed knowledge from the most recurrent to the most complex pathologies in the field of Hematological, Renal and Oncological Disorders has boosted the improvement of the quality of health of these patients. A broad spectrum of action with relevant advances in the methodologies used. For this reason, TECH has decided to design this 100% online program that offers professionals the possibility of a complete update in the Techniques used in Neonatology Units. All, in addition, with an innovative didactic content and accessible 24 hours a day, 7 days a week.





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A 100% online Postgraduate Diploma that provides you with the latest information on the approach to neonates with hematological, renal and oncological disorders”

The survival rate of patients in Neonatology Units has achieved an important progression due to the application of certain diagnostic, monitoring, stabilization and follow-up techniques. In this sense, it is essential not only to introduce the latest advances, but also to use the most appropriate methodology.

In this sense, the medical professionals must be aware of from the most significant studies of the generalities in Hematology, through the Nephrourological pathologies to the most effective treatment in patients with Wills' Tumor. Based on the most recent information, this academic institution has developed this Postgraduate Diploma in Advanced Techniques in Neonatology.

A 6-month program of 450 teaching hours of intensive updating in screening, therapeutic and follow-up procedures for newborns with Hematological, Renal, Oncological, Endocrine or Dysmorphological disorders. For this purpose, the graduates also have at their disposal video summaries of each topic, videos in detail, scientific literature and simulations of case studies.

Likewise, the Relearningsystem, consisting of the continuous reiteration of key concepts throughout the academic itinerary, will allow the students to consolidate the most important contents and reduce the long hours of study so frequent in other pedagogical methods.

A program that does not require attendance, nor does it have classes with fixed schedules, so it adapts to the real needs of medical professionals who are looking for a flexible and compatible update with their most demanding daily responsibilities. Undoubtedly an ideal academic option that only TECH, the largest digital university in the world, offers.

This **Postgraduate Diploma in Advanced Techniques in Neonatology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Pediatrics and Neonatology
- ♦ 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
- ♦ 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



No attendance, no classes with fixed schedules. This university qualification is adapted to the most demanding professional responsibilities”

“

A program designed to provide you with the most recent advances in clinical and laboratory diagnostic studies of chromosomal disorders”

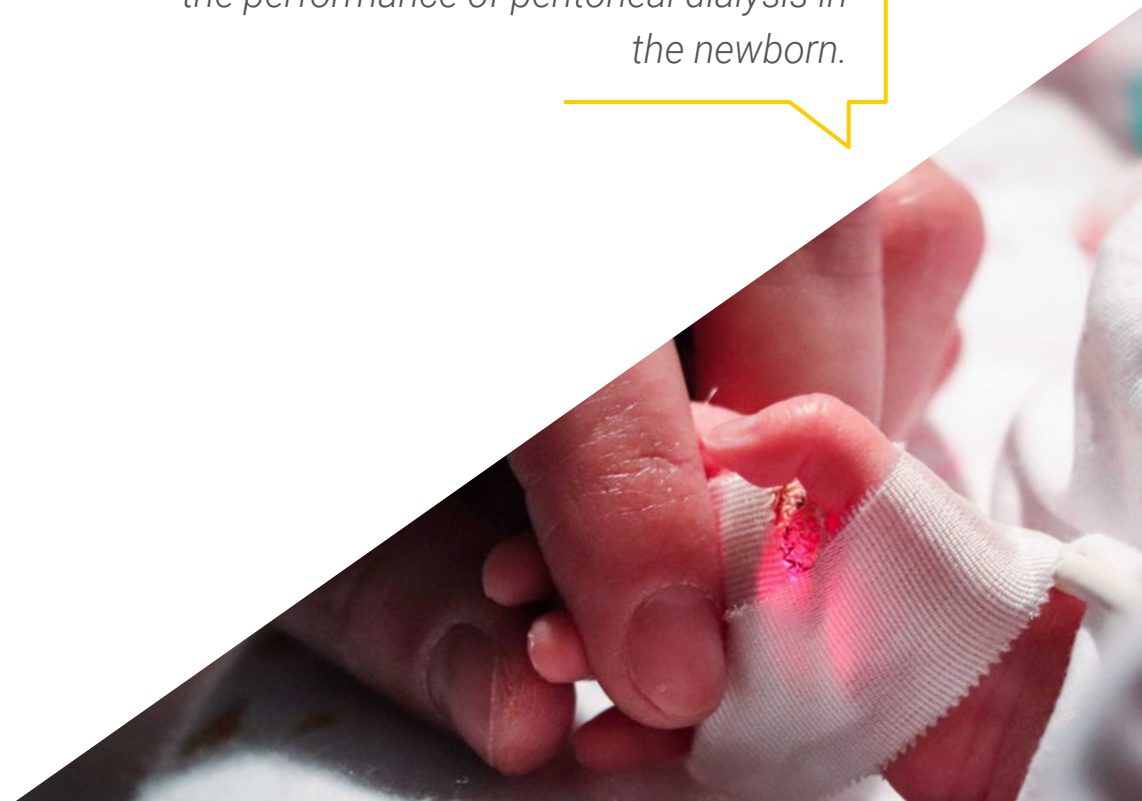
The program's teaching staff includes professionals from sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professionals 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 professionals must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.

A Virtual Library accessible 24 hours a day will allow you, whenever you wish, to access the most rigorous information on Neonatology.

With this program, you will be aware of the most effective procedures used in the performance of peritoneal dialysis in the newborn.



02 Objectives

The main objective of this Postgraduate Diploma is to provide the medical professionals with the most complete updating process in Advanced Techniques in Neonatology in 450 teaching hours. For this reason, throughout the academic itinerary you will have not only innovative didactic material, but also a syllabus that presents a theoretical-practical approach and even simulations of clinical case studies, which will give a much more authentic vision of the management of the main pathologies in neonates.





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Integrate into your clinical practice the most effective methodology in the management of neonates with nephrourological pathology”



General Objectives

- ♦ Delve into preterm neonates and their implications
 - ♦ Update knowledge of the indications for prevention of the sick neonate
 - ♦ 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



This university qualification gives special relevance to hyperbilirubinemia and patient monitoring and its current therapeutic approach”



Specific Objectives

Module 1. Hematologic Disorders in Neonatology

- ♦ Delve in Hematology as a basis for the assumption of the different health conditions
- ♦ Deepen in Hematology as a basis for the Improvement of the different Disease conditions
- ♦ Indicate the systematization of the various moments of intervention through the component elements of blood
- ♦ Deepen in the expansion of data on everything that currently represents the transfusion of biological elements of blood to the newborn
- ♦ Update knowledge on hyperbilirubinemia and its measurement
- ♦ Describe the different modalities of icteric neonates

Module 2. Renal Disorders in Neonatology and in the Internal Environment

- ♦ Update knowledge on the mechanisms of Physiology and Pathophysiology of the Internal Environment and the Kidney
- ♦ Deepen in the anatomy highlighted for Nephrourological pictures
- ♦ Inquire into Malformative Nephrourological Pathology
- ♦ Update knowledge on Renal Infectious Pathology in the newborn
- ♦ Describe each of the normal and altered hydroelectrolyte situations
- ♦ Delving into the measurement of the Internal Environment: balance sheets

Module 3. Neonatal Endocrinology, Dysmorphology and Oncology

- ♦ Deepen the systematization of the assessment of dysmorphological problems
- ♦ Deepen the diagnosis of dysmorphological problems
- ♦ Identify the essential points in the adequate management of this type of situations
- ♦ Describe the hormonal balance of the neonate
- ♦ Delineate the key points in the various modalities of neonatal screening

03

Course Management

One of the elements that distinguishes TECH programs is its specialized faculty. In this case, students will have at their disposal a syllabus developed by an excellent team of experts in Neonatology and with extensive professional experience in Critical Care and Pediatric Emergencies. In addition, the research career of the teachers will allow you to access the most current and rigorous information on the most advanced techniques used in this medical field.





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An exhaustive syllabus on Advanced Techniques in Neonatology elaborated by specialists with a long professional career in leading hospitals in this area”

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)
- ♦ Principal investigator of international multi-center projects
- ♦ Degree in Medicine from the University of Granada

Professors

Dr. Porta Ribera, Roser

- ♦ Neonatology in the Neonatal Unit at the Germans Trias i Pujol University Hospital
- ♦ Neonatology at Dexeus Hospital
- ♦ Coordinator of the Neonatal Unit at the Germans Trias i Pujol University Hospital
- ♦ Pediatrician in Neonatology at Germans Trias I Pujol Hospital
- ♦ Associate Professor's Degree in Pediatrics at the Autonomous University of Barcelona
- ♦ Degree in Medicine and Surgery from the University of Barcelona
- ♦ Certified and Instructor in Neonatal CPR by SENEo
- ♦ Certified in pediatric CPR by the European Resuscitation Council

Dr. Díez Delgado, Javier

- ♦ Neonatology at Torrecárdenas Hospital
- ♦ Head of the Critical Care and Pediatric Emergency Unit of the Pediatric Service of the Hospital Torrecárdenas de Almería
- ♦ Instructor in Pediatric and Neonatal CPR
- ♦ Principal investigator or collaborator in the Vaccinology and Neonatology lines
- ♦ Lecturer in the Master of Emergency Medicine at the UAL
- ♦ Degree in Medicine and Surgery from the Faculty of Medicine of the University of Granada
- ♦ Member of: SPAO Board of Directors; SENEo Neonatal Transport Working Group; Spanish Vaccinology Association



04

Structure and Content

TECH has designed a university qualification that responds to the real needs of updating medical professionals. Therefore, this syllabus brings together the latest information on Advanced Techniques in Neonatology. Thus, by means of first level pedagogical tools, the graduates will achieve a complete update in the detection and therapeutic processes in Hematological, Endocrine, Oncological and Renal Disorders. This content is also available at any time of the day, from a digital device with Internet connection.





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A syllabus that includes the most recent medical literature on Neonatal Anemia, its diagnosis and the most advisable therapeutics according to each clinical case”

Module 1. Hematologic Disorders in Neonatology

- 1.1. General Aspects of Hematology
 - 1.1.1. Development of the hematopoietic system
 - 1.1.2. Embryology
 - 1.1.3. Pathophysiological Bases
 - 1.1.4. Extrauterine adaptation
- 1.2. Neonatal Anemia
 - 1.2.1. Classification
 - 1.2.2. Diagnosis
 - 1.2.3. Treatment
 - 1.2.4. Monitoring
- 1.3. Fetal Hydrops
 - 1.3.1. Fundamentals
 - 1.3.2. Diagnosis
 - 1.3.3. Treatment
 - 1.3.4. Monitoring
- 1.4. Neonatal Hiperbilirrubinemia
 - 1.4.1. Fundamentals
 - 1.4.2. Diagnosis
 - 1.4.3. Classification
 - 1.4.4. Monitoring
- 1.5. Treating Excreta
 - 1.5.1. Fundamentals
 - 1.5.2. Types of Treatment
 - 1.5.3. Exchange Transfusion
 - 1.5.4. Monitoring





- 1.6. Polycythemia
 - 1.6.1. Fundamentals
 - 1.6.2. Diagnosis
 - 1.6.3. Treatment
 - 1.6.4. Monitoring
- 1.7. Platelet Alterations
 - 1.7.1. Fundamentals
 - 1.7.2. Diagnosis
 - 1.7.3. Treatment
 - 1.7.4. Monitoring
- 1.8. Blood Transfusion and Blood By-Products in the Neonatal Period
 - 1.8.1. Fundamentals
 - 1.8.2. Transfusion types
 - 1.8.3. Monitoring
 - 1.8.4. Monitoring
- 1.9. Hemorrhages and Coagulation Disorder
 - 1.9.1. Fundamentals
 - 1.9.2. Types
 - 1.9.3. Treatment
 - 1.9.4. Monitoring
- 1.10. Immunodeficiencies
 - 1.10.1. Classification
 - 1.10.2. Diagnosis
 - 1.10.3. Treatment
 - 1.10.4. Monitoring

Module 2. Renal Disorders in Neonatology and in the Internal Environment

- 2.1. Embryology of the renal system and basis of the anatomy of the renal system
 - 2.1.1. Development of the genito-urinary system
 - 2.1.2. Embryology
 - 2.1.3. Pathophysiological Bases
 - 2.1.4. Extrauterine adaptation
- 2.2. Nephrological Pathology in a Newborn
 - 2.2.1. Classification
 - 2.2.2. Diagnosis
 - 2.2.3. Treatment
 - 2.2.4. Monitoring
- 2.3. Urinary Infections
 - 2.3.1. Urinary Infections
 - 2.3.2. Vesicoureteral Reflux
 - 2.3.3. Hydronephrosis
 - 2.3.4. Renal dysplasia and neonatal polycystic kidney disease
- 2.4. Peritoneal Dialysis in a Newborn
 - 2.4.1. Fundamentals
 - 2.4.2. Types
 - 2.4.3. Ways to do it
 - 2.4.4. Monitoring
- 2.5. Assessment of renal function Acute renal failure. Neonatal nephrotic syndrome
Renal tubular acidosis
 - 2.5.1. Assessing Renal Function
 - 2.5.2. Acute Kidney Failure
 - 2.5.3. Nephrotic Syndrome
 - 2.5.4. Renal Tubular Acidosis
- 2.6. Neonatal Arterials Hypertension
 - 2.6.1. Classification
 - 2.6.2. Diagnosis
 - 2.6.3. Treatment
 - 2.6.4. Monitoring
- 2.7. Water, Electrolyte and Metabolic Disorders of a Newborn.. Imperceptible Water Losses
 - 2.7.1. Classification
 - 2.7.2. Diagnosis
 - 2.7.3. Treatment
 - 2.7.4. Monitoring
- 2.8. Electrolytes Sodium (Na+); Potassium (K+); Calcium (Ca++)
 - 2.8.1. Classification
 - 2.8.2. Diagnosis
 - 2.8.3. Treatment
 - 2.8.4. Monitoring
- 2.9. Glucose
 - 2.9.1. Classification
 - 2.9.2. Diagnosis
 - 2.9.3. Treatment
 - 2.9.4. Monitoring
- 2.10. Water Balance in Neonatals Admitted to the ICU: Patient Monitoring
 - 2.10.1. Classification
 - 2.10.2. Diagnosis
 - 2.10.3. Treatment
 - 2.10.4. Monitoring

Module 3. Neonatal Endocrinology, Dysmorphology and Oncology

- 3.1. Metabolopathies
 - 3.1.1. Classification
 - 3.1.2. Diagnosis
 - 3.1.3. Treatment
 - 3.1.4. Monitoring
- 3.2. Different Types of Screening for the Various Metabolopathies. Criteria for Listing a Metabolopathy in Neonatal Screening
 - 3.2.1. Classification of susceptible diseases screening
 - 3.2.2. Criteria for Listing a Metabolopathy in Neonatal Screening
 - 3.2.3. Clinical data
 - 3.2.4. Ways to do it
- 3.3. Screening Techniques: Procedure for the Heel Prick Test
 - 3.3.1. Ways to do it
 - 3.3.2. Diagnosis Classification
 - 3.3.3. Organization
 - 3.3.4. Specific Metabolopathies Centers
- 3.4. Chromosomopathies
 - 3.4.1. Trisomy 21 (Down Syndrome)
 - 3.4.2. Trisomy 18 (Edwards Syndrome)
 - 3.4.3. Trisomy 13 (Patau's Syndrome)
 - 3.4.4. Turner Syndrome (45X0). Klinefelter Syndrome (47XXY)
- 3.5. Study of Chromosomal Alterations
 - 3.5.1. Classification
 - 3.5.2. Clinical diagnosis
 - 3.5.3. Laboratory Diagnosis
 - 3.5.4. Monitoring
- 3.6. Major Structural Changes
 - 3.6.1. Classification
 - 3.6.2. Diagnosis
 - 3.6.3. Subspecialty intervention
 - 3.6.4. Monitoring

- 3.7. General Aspects of Neonatal Oncology
 - 3.7.1. Fundamentals
 - 3.7.2. Tumor types
 - 3.7.3. Staging
 - 3.7.4. Monitoring
- 3.8. Neuroblastoma
 - 3.8.1. Ethological basis
 - 3.8.2. Diagnosis
 - 3.8.3. Treatment
 - 3.8.4. Monitoring
- 3.9. Wilms Tumor
 - 3.9.1. Ethological basis
 - 3.9.2. Diagnosis
 - 3.9.3. Treatment
 - 3.9.4. Monitoring
- 3.10. Teratomas
 - 3.10.1. Ethological basis
 - 3.10.2. Diagnosis
 - 3.10.3. Treatment
 - 3.10.4. Monitoring



Do an effective update on the criteria for including Metabolopathies in Neonatal Screening”

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. 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 Diploma in Advanced Techniques in Neonatology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.





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

This **Postgraduate Diploma in Advanced Techniques in Neonatology** 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** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Diploma in Advanced Techniques in Neonatology**

Official N° of hours: **450 h.**



*Apostille Convention. In the event that the student wishes to have their paper certificate 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 language
virtual classroom



Postgraduate Diploma
Advanced Techniques
in Neonatology

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

Postgraduate Diploma

Advanced Techniques in Neonatology