Postgraduate Certificate
Non-Invasive Respiratory Support Techniques

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Postgraduate Certificate
Non-Invasive Respiratory Support Techniques

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

Website: **www.techtitute.com/pk/medicine/postgraduate-certificate/non-invasive-respiratory-support-techniques**

Index

01

Introduction

Nowadays, an increasing number of specialists are opting to use Non-Invasive Mechanical Ventilation to treat respiratory diseases with lower invasiveness and greater comfort for the patient. Therefore, the techniques used for Non-Invasive Respiratory Support are continuously evolving to optimize their application and ensure the patient's full stabilization. Given the positive impact they have on preserving the well-being of patients, it is essential for a physician who wishes to stay at the forefront of their profession to be knowledgeable about these advancements. This is why TECH has designed this program, which allows students to delve into the latest scientific evidence on the management of CPAP and BiPAP online from the comfort of their homes.

Learn, with this Postgraduate Certificate, about the recent scientific evidence on the management of BiPAP and CPAP in different clinical situations"

The use of non-invasive respiratory support has gained popularity in the medical field in recent years, as an increasing number of scientific studies support its use in various types of respiratory diseases. As a result, the techniques for its application are constantly evolving, aiming to improve their effectiveness in patients, enhance their quality of life, and ensure their well-being. Therefore, staying up to date in this field is crucial for pulmonologists who do not want to lag behind in the evolution of their medical area.

In light of this situation, TECH has created this program, allowing physicians to delve into the latest scientific evidence regarding the use of Non-Invasive Respiratory Support Techniques. During 6 weeks of exhaustive study, you will delve into sophisticated strategies for the evaluation of the level of ventilatory support needed in the patient or delve into the updated indications for the use of CPAP and BiPAP. You will also learn about state-of-the-art pressure support ventilation methods and high-flow nasal goggle fitting techniques.

Thanks to the fully online nature of this program, specialists can create their own study schedules for an entirely effective update. Additionally, this Diploma has been designed by renowned pulmonologists who have worked in leading hospitals throughout Spain. As a result, the knowledge acquired about Non-Invasive Respiratory Support Techniques by the students will maintain its professional applicability intact.

This **Postgraduate Certificate in Non-Invasive Respiratory Support Techniques** 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 Non-Invasive Mechanical Ventilation
- 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 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

Update yourself in this area of Pneumology at your own pace of study, enjoying TECH's innovative Relearning methodology"

Through this program, you will delve into the up-to-date techniques for establishing"

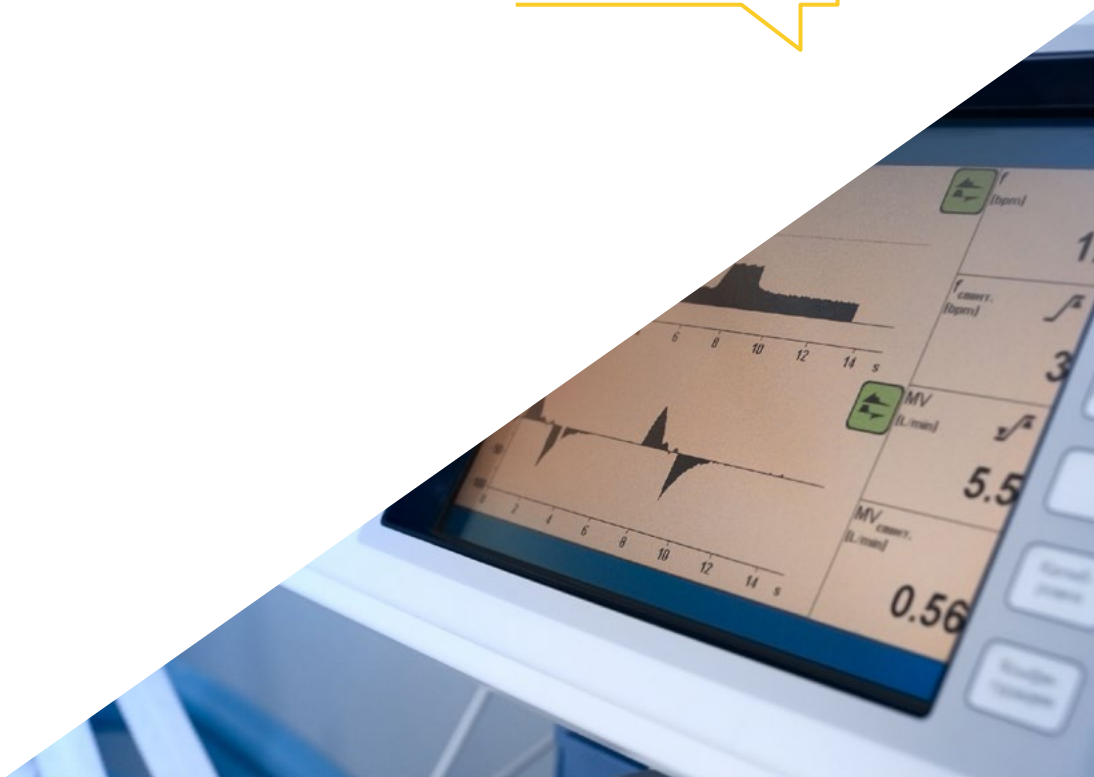
Study through innovative multimedia didactic formats that will optimize your update process.

Be able to learn more about the operation of the most advanced pressure support ventilation methods thanks to this program.

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 academic year For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

This Postgraduate Certificate has been designed with the aim of ensuring professional updates regarding Non-Invasive Respiratory Support Techniques for the students. Through this academic experience, they will delve into the indications and contraindications of each technique and their selection for each type of patient based on the latest scientific evidence. Furthermore, their professional development will be maintained through the pursuit of the general and specific objectives that TECH has outlined for this program.

Adopt the latest Non-Invasive Respiratory Support Techniques into your daily medical practice in just 150 hours"

General Objectives

- Understand the importance and role of Non-Invasive Mechanical Ventilation in the treatment of acute and chronic respiratory pathologies
- Acquire knowledge of the updated indications and contraindications for the use of Non-Invasive Mechanical Ventilation, as well as the different types of devices and ventilation modes
- Develop skills and competencies in monitoring patients with Non-Invasive Mechanical Ventilation, including data interpretation and the detection and prevention of complications
- Explore cutting-edge technologies used in the telemonitoring of patients with Non-Invasive Mechanical Ventilation and the ethical and legal aspects related to its use
- Delve into the key differences in Non-Invasive Mechanical Ventilation in Pediatrics
- Delve your understanding of the ethical aspects related to the management of patients requiring NIV

Specific Objectives

- Understand the principles and mechanics of continuous positive pressure in the airway, positive pressure in the airway, pressure support ventilation, volume-controlled ventilation, and high-flow nasal cannula (HFNC)
- Identify the indications for using each of these ventilation modalities and know how to adjust the necessary parameters
- Compare different ventilation modalities to choose the most suitable one for each patient
- Gain in-depth knowledge of the utility of high-frequency ventilation and other innovative ventilation modes

Learn about recent advances in ventilatory modalities and be able to choose the most appropriate ones for each type of patient"

03

Course Management

Thanks to TECH's unwavering commitment to raising the quality of its programs to the highest level, this program features an excellent teaching team composed of the best specialists in Pulmonology. All of these physicians actively work in prestigious hospitals. This way, the knowledge they will impart to their students regarding Non-Invasive Respiratory Support Techniques will be in line with the recent advances in this field.

This Postgraduate Certificate is delivered by leading specialists in Pulmonology to provide you with the most practically applicable knowledge of Non-Invasive Respiratory Support Techniques"

Management

Dr. Landete Rodríguez, Pedro

- Coordinator of the Basic Ventilation Unit at La Princesa University Hospital
- Pulmonologist at La Princesa University Hospital
- Pulmonologist at Blue Healthcare
- Researcher in various research groups
- Professor in undergraduate and postgraduate university studies
- Author of numerous scientific publications in international journals and contributor to several book chapters
- Speaker at international medical congresses
- Doctor Cum Laude from the Autonomous University of Madrid

Professors

Dr. Ferrer Espinos, Santos

- Assistant in the Pulmonology Service at the Respiratory Care Unit of the Hospital Clínico Universitario de Valencia
- Member of the Emerging Non-Invasive Mechanical Ventilation and Respiratory Care Group of SEPAR
- Master's Degree in Biomedical Research from the University of Valencia

04

Structure and Content

The syllabus of this academic program has been designed with the goal of delivering the most up-to-date Non-Invasive Respiratory Support Techniques to pulmonologists interested in the field of NIVM. The educational resources in this innovative Postgraduate Certificate will be available in a wide variety of textual and multimedia formats, allowing the student to choose those that best suit their study needs. Furthermore, its 100% online format will enable you to update yourself at the time and place of your choice.

Enjoy excellent educational materials available in a wide variety of textual and multimedia formats to choose those that completely align with your preferred study method"

Module 1. Non-Invasive Respiratory Support Techniques

1.1. Assessment of the Required Ventilatory Support Level
- 1.1.1. Assessment of Clinical Indication
- 1.1.2. Interpretation of Arterial Blood Gas
- 1.1.3. Assessment of Respiratory Mechanics
- 1.1.4. Determination of the Required Ventilatory Support Level
- 1.1.5. Changing Ventilatory Modality

1.2. Continuous Positive Airway Pressure (CPAP)
- 1.2.1. CPAP principles and mechanics
- 1.2.2. Indications for the use of CPAP
- 1.2.3. Adjustment of CPAP parameters
- 1.2.4. Monitoring and Management of CPAP Complications
- 1.2.5. Comparison of CPAP with Other Ventilatory Modalities

1.3. Positive Airway Pressure (BiPAP)
- 1.3.1. Principles and Mechanics of BiPAP
- 1.3.2. Indications for BiPAP Use
- 1.3.3. Adjusting BiPAP Parameters
- 1.3.4. Monitoring and Management of BiPAP Complications
- 1.3.5. Comparison of BiPAP with Other Ventilatory Modalities

1.4. Pressure Support Ventilation
- 1.4.1. Conventional (PSV)
- 1.4.2. Proportional (PPSV)
- 1.4.3. Adaptive (ASV)
- 1.4.4. Intelligent Adaptive (iVAPS)

1.5. Volume-Controlled Ventilation
- 1.5.1. Principles and Mechanics of Volume NIV
- 1.5.2. Indications for Volume NIMV Use
- 1.5.3. Adjusting Volume Mode Parameters
- 1.5.4. Monitoring and Management of Complications in Volume Mode
- 1.5.5. Comparison of Volume Mode with Other Ventilatory Modalities

1.6. High-Flow Nasal Cannula (HFNC)
- 1.6.1. Principles and Mechanics of HFNC
- 1.6.2. Indications for HFNC Use
- 1.6.3. Adjusting HFNC Parameters
- 1.6.4. Monitoring and Management of HFNC Complications
- 1.6.5. Comparison of HFNC with Other Ventilatory Modalities

1.7. Combined Ventilation (Positive Pressure (CPAP/BiPAP) + HFNC)
- 1.7.1. Principles and Mechanics of Combined Therapy
- 1.7.2. Indications for Combined Therapy Use
- 1.7.3. Starting Combined Therapy, Simultaneously or Staggered
- 1.7.4. Adjusting Parameters for Combined Therapy
- 1.7.5. Monitoring and Management of Complications in Combined Therapy
- 1.7.6. Comparison of Combined Therapy with Other Ventilatory Modalities

1.8. High-Frequency Ventilation
- 1.8.1. Indications for High-Frequency NIMV Use
- 1.8.2. Adjusting Parameters
- 1.8.3. Utility in Acute Patients
- 1.8.4. Utility in Chronic Patients
- 1.8.5. Monitoring and Management of Complications
- 1.8.6. Comparison with Other Ventilatory Modalities

1.9. Others Ventilatory Modes
- 1.9.1. Pressure Support Ventilation with Mandatory Flow Control (MFC)
- 1.9.2. High-Velocity Nasal Cannula Ventilation
- 1.9.3. Other Innovative Ventilatory Modes

1.10. Humidification and Temperature Adjustment in NIV
- 1.10.1. Importance of Adequate Humidification and Temperature in NIV
- 1.10.2. Types of Humidification Systems in NIV
- 1.10.3. Indications for Adding a Humidifier in Acute Patients
- 1.10.4. Indications for Humidifier Use in Chronic Patients
- 1.10.5. Methods for Monitoring Humidification in NIV
- 1.10.6. Temperature Adjustment in NIV
- 1.10.7. Monitoring and Management of Complications Related to Humidification and Temperature in NIV

05

Methodology

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

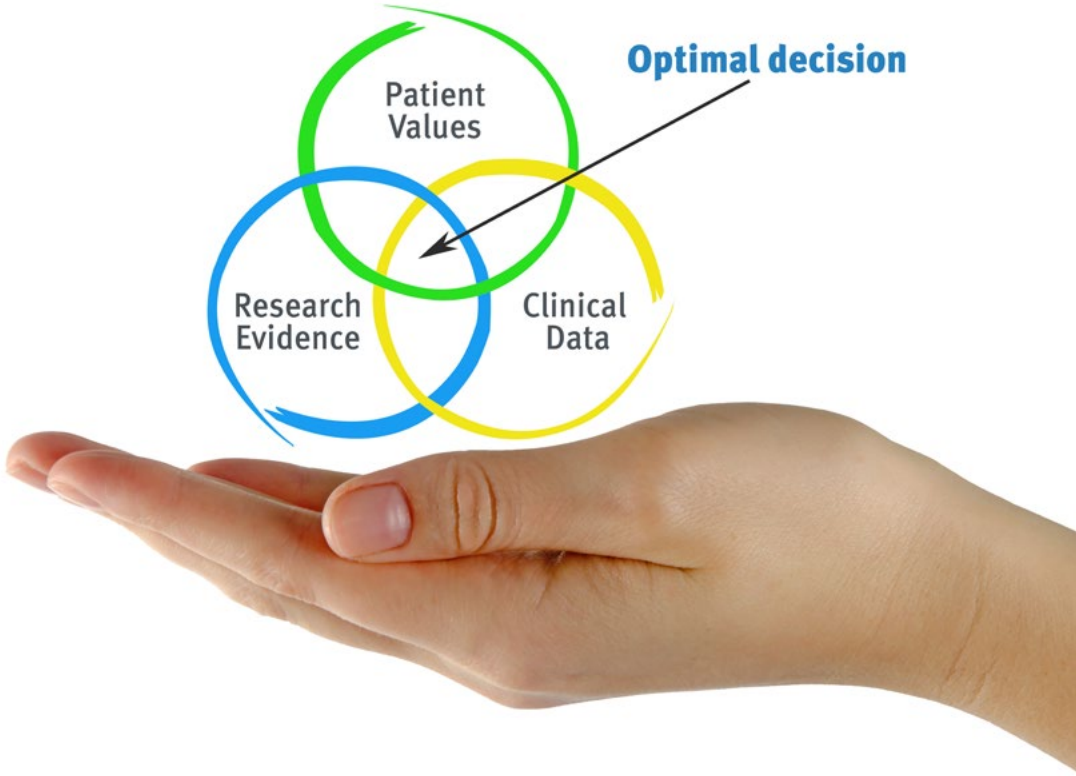
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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.

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:

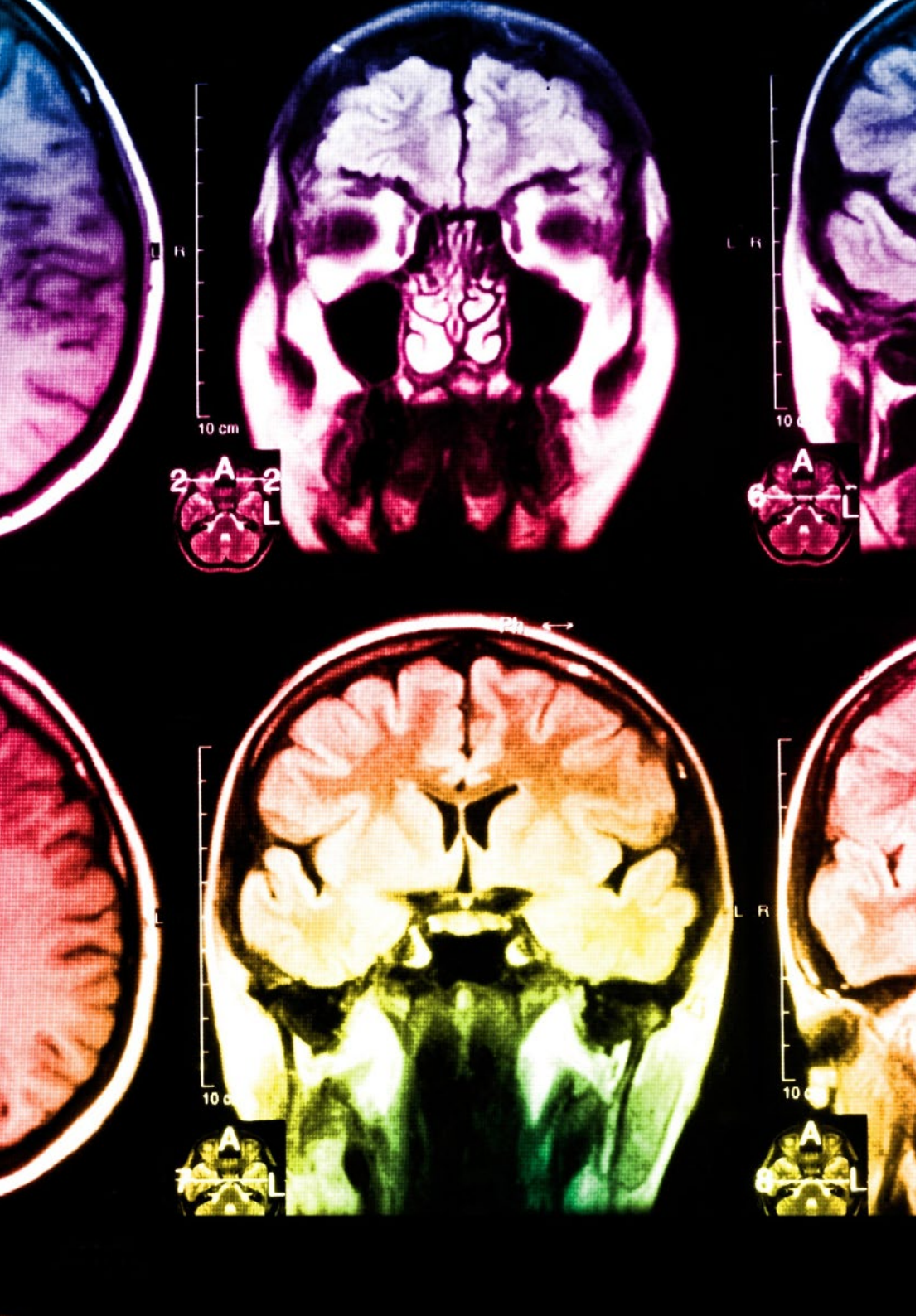
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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.

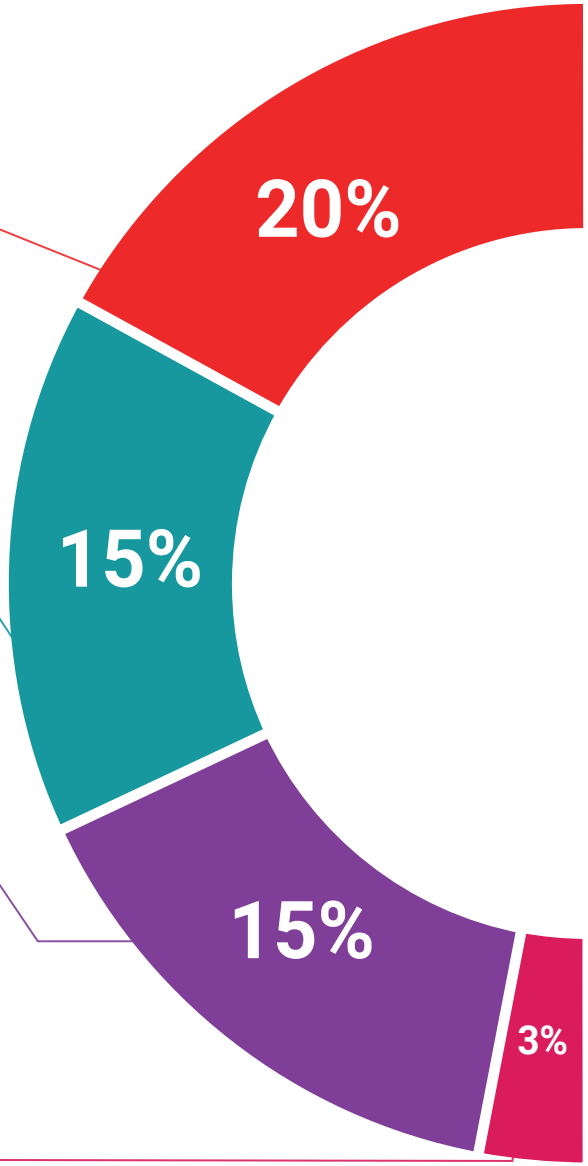
Interactive Summaries

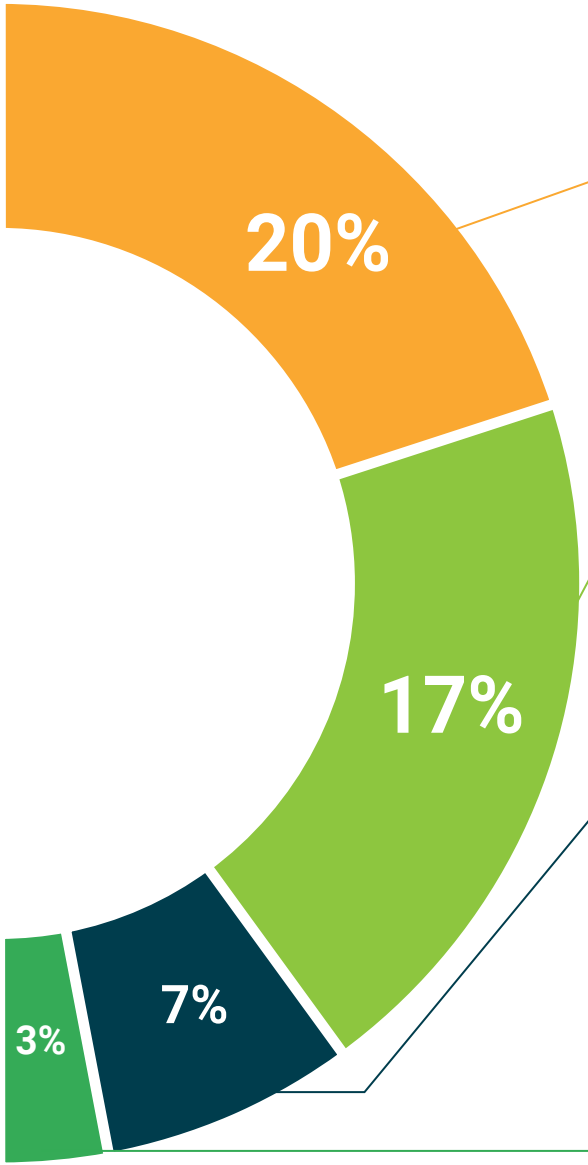
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Non-Invasive Respiratory Support Techniques guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

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

This **Postgraduate Certificate in Non-Invasive Respiratory Support Techniques** contains the most complete and up-to-date scientific 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 Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Non-Invasive Respiratory Support Techniques**

Official Nº of Hours: **150 h.**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Awards the followi ng

CERTIFICATE

to

Mr./Ms. _____, with identification number _____ .

For having passed and accredited the following progra m

POSTGRADUATE CERTIFICATE

in

Non-Invasive Respiratory Support Techniques

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018 .

June 17, 2020

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This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

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