Postgraduate Certificate
Non-Invasive Ventilation in a Highly Qualified IRCU

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Postgraduate Certificate

Non-Invasive Ventilation in a Highly Qualified IRCU

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

Website: **www.techtitute.com/in/medicine/postgraduate-certificate/non-invasive-ventilation-highly-qualified-ircu**

Index

01

Introduction

IRCUs accumulate a large number of patients who have undergone Mechanical Ventilation to preserve their health, avoiding further respiratory complications. As a result, techniques of polygraphy to identify abnormal respiratory patterns during NIVM or procedures to manage secretions have been perfected, with the aim of ensuring an optimal recovery for individuals with various pathologies. This situation means that pulmonologists working in these areas must stay informed about these advancements to stay at the forefront of their field. For this reason, TECH has created this 100% online program that allows students to learn about cutting-edge methods for resuming spontaneous breathing or addressing patient shock.

This Postgraduate Certificate will enable you to master the latest polygraphy techniques that identify abnormal respiratory patterns during NIVM"

IRCUs have experienced rapid growth in recent years, as they are essential for treating the most complex respiratory diseases without overburdening Intensive Care Units. Alongside this growth, the most advanced procedures and techniques used in these areas are constantly evolving, aiming to improve the quality of life for hospitalized individuals. Consequently, specialists working in these services are obligated to stay up-to-date in this field to practice updated medicine.

This is why TECH has designed this program, through which students will delve into the most advanced aspects of Non-Invasive Ventilation in a High Capacity IRCU. Throughout this academic period, they will explore advanced uses of polygraphy to identify abnormal respiratory patterns during NIVM or to interpret pulmonary complications in patients. They will also explore the Respiratory Physiotherapy techniques used in IRCU.

All of this will be done through a 100% online methodology, allowing students to update themselves without the need for inconvenient travel to a study center. Additionally, they will benefit from a set of educational materials created by the best active specialists in Pulmonology, who actively practice in leading IRCUs. Therefore, the knowledge that students will acquire will be in excellent alignment with the industry's evolution.

This **Postgraduate Certificate in Non-Invasive Ventilation in a Highly Qualified IRCU** 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 specialists in Pulmonology
- 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

Master, with this program, the latest scientific advances in cough management assistants"

Update yourself in a 100% online way and without depending on uncomfortable pre-set schedules"

Position yourself as a cutting-edge pulmonologist in just 6 weeks, enjoying the utmost convenience of study.

Discover the most advanced Physiotherapy techniques used in IRCUs through this TECH Postgraduate Certificate.

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

TECH has designed this Diploma to ensure a comprehensive update in Non-Invasive Ventilation in a High Capacity IRCU for the specialist. Thanks to this academic experience, you will delve into weaning procedures or deepen your understanding of the latest scientific evidence regarding the use of inotropes and vasodilators in these units. This way, your update will be preserved by achieving the following general and specific objectives.

Learn the latest scientific evidence regarding the use of inotropes and vasodilators in IRCU and incorporate these advancements into your daily practice"

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

- Describe the criteria for performing tracheostomy in patients with prolonged invasive mechanical ventilation
- Identify cutting-edge techniques used in weaning from invasive mechanical ventilation through tracheostomy
- Analyze the utility of non-invasive respiratory support in the removal of orotracheal intubation
- Delve into the identification of abnormal respiratory patterns, monitoring of the effectiveness of respiratory support, and the interpretation of respiratory complications associated with NIV
- Understand the objectives and benefits of respiratory physiotherapy in IRCUs
- Deepen your knowledge of inotropes, vasodilators, and the management of hypotension with fluid therapy

Enjoy an excellent medical update by means of the most innovative didactic materials in the pedagogical environment"

03

Course Management

In order to maintain the high educational standards that characterize TECH Technological University's programs, an excellent group of active specialists in Pulmonology has been selected to be responsible for delivering this Postgraduate Certificate. Since these doctors are the ones responsible for creating the educational content of the program, all the knowledge that the student will acquire will be fully up-to-date.

Update yourself in Non-Invasive Ventilation in a High Capacity IRCU with the guidance of experienced pulmonologists in these units"

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. Ávalos Pérez-Urrutia, Elena

- Specialist in Pulmonology at the Hospital Universitario de La Princesa
- Researcher specializing in sleep-related respiratory disorders and non-invasive mechanical ventilation
- Collaborating instructor in undergraduate medical studies
- Master's Degree in Medicine, Complutense University of Madrid

04

Structure and Content

The syllabus of this Postgraduate Certificate has been developed with the idea of providing the specialist with the most up-to-date and relevant knowledge about Non-Invasive Ventilation in a High Capacity IRCU. All the academic contents that you will enjoy throughout this academic experience will be available in a wide variety of multimedia and textual formats. Furthermore, its 100% online format will allow you to study 24 hours a day and at your convenience.

TECH's Relearning method will allow you to learn at your own pace without limitations, with a flexible education tailored to your personal, professional, and academic needs"

Module 1. Beyond Non-Invasive Ventilation in an IRCU Highly Specialized Concepts

1.1. Ventilator Weaning with Tracheostomy in an Intermediate Respiratory Care Unit
- 1.1.1. Criteria for Performing Tracheostomy in Patients with Prolonged IMV
- 1.1.2. Patient Preparation for Weaning from IMV
- 1.1.3. Weaning Techniques from IMV via Tracheostomy
- 1.1.4. Assessment of Tolerance during Weaning from IMV via Tracheostomy
- 1.1.5. Management of Complications during Weaning

1.2. Tracheostomy Management in the Intermediate Respiratory Care Unit
- 1.2.1. Selecting the Appropriate Tracheostomy Technique for the Patient
- 1.2.2. Initial Tracheostomy Care in the Intermediate Respiratory Care Unit
- 1.2.3. Tracheostomy Tube Replacement and Maintenance
- 1.2.4. Monitoring Complications
- 1.2.5. Assessing the Appropriate Time of Tracheostomy Removal
- 1.2.6. Decannulation Protocol

1.3. Utilizing Non-Invasive Respiratory Support in the disconnection of orotracheal intubation
- 1.3.1. Selection of patients who are candidates for disconnection
- 1.3.2. Techniques for disconnection of orotracheal intubation
- 1.3.3. Evaluation of tolerance to noninvasive respiratory support during disconnection
- 1.3.4. Monitoring and management of complications during disconnection
- 1.3.5. Evaluation of the success of noninvasive respiratory support in the disconnection of orotracheal intubation and patient follow-up

1.4. Secretion Management and Cough Assistance
- 1.4.1. Indications
- 1.4.2. How to measure it
- 1.4.3. Different devices
- 1.4.4. Pressure configuration
- 1.4.5. How to use it

1.5. NIMV and polygraphy, indications and interpretation
- 1.5.1. Indications for polygraphy in the NIMV patient
- 1.5.2. Interpretation of polygraphy results in patients with NIMV
- 1.5.3. Identification of abnormal respiratory patterns on polygraph during the use of NIMV
- 1.5.4. Monitoring the efficacy of respiratory support during polygraphy
- 1.5.5. Interpretation of respiratory complications associated with NIMV on polygraphy

1.6. Physiotherapy in an IRCU
- 1.6.1. Objectives and benefits of respiratory physiotherapy in the IRCU
- 1.6.2. Respiratory physiotherapy techniques used in the IRCU
- 1.6.3. Physiotherapy in the prevention and treatment of respiratory complications in the IRCU
- 1.6.4. Assessment and follow-up of patient progress with respiratory physiotherapy in the IRCU
- 1.6.5. Multidisciplinary collaboration in the implementation of respiratory physiotherapy in the IRCU

1.7. Management of shock and other frequently used drugs in IRCU
- 1.7.1. Types of shock and its management in the IRCU
- 1.7.2. Indications and dosage of vasopressors in the management of shock in the IRCU
- 1.7.3. Use of inotropics and vasodilators in the management of shock in the IRCU
- 1.7.4. Management of hypotension in the IRCU with fluid therapy
- 1.7.5. Monitoring hemodynamic and patient response to drugs used in the management of shock in IRCU

1.8. Swallowing Disorders Evaluation
- 1.8.1. Prolonged Orotracheal Intubation
- 1.8.2. Tracheostomy.
- 1.8.3. Ineffective Swallowing

1.9. Nutritional study in patients with prolonged admission to the IRCU
- 1.9.1. Nutritional and metabolic assessment in patients in the IRCU
- 1.9.2. Evaluating Nutritional Status and Energy Needs
- 1.9.3. Nutritional strategies for patients with prolonged admission to the IRCU
- 1.9.4. Monitoring of nutritional support and necessary adjustments in IRCU patients
- 1.9.5. Prevention and management of nutritional complications in patients with prolonged admission to the IRCU

1.10. Management of Unstable Patients
- 1.10.1. Management of Rapid Atrial Fibrillation
- 1.10.2. Management of Supraventricular Tachycardia
- 1.10.3. Management of Cardiopulmonary Arrest
- 1.10.4. Orotracheal Intubation
- 1.10.5. Sedation in NIV

05

Methodology

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

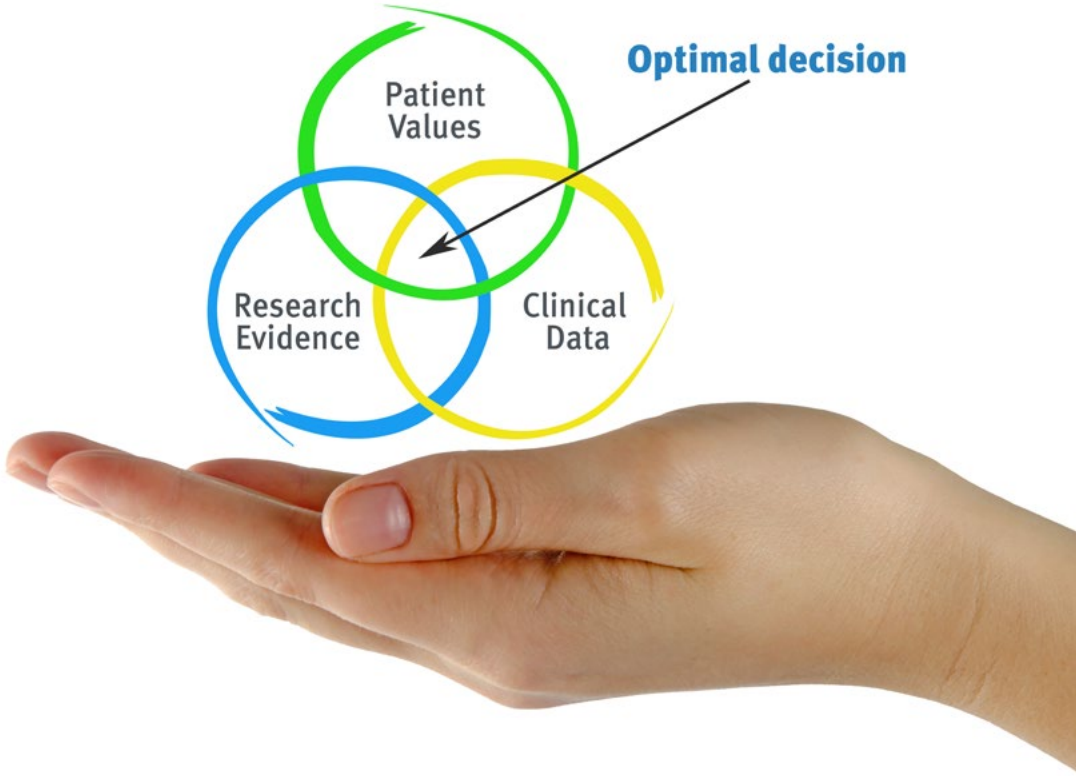
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

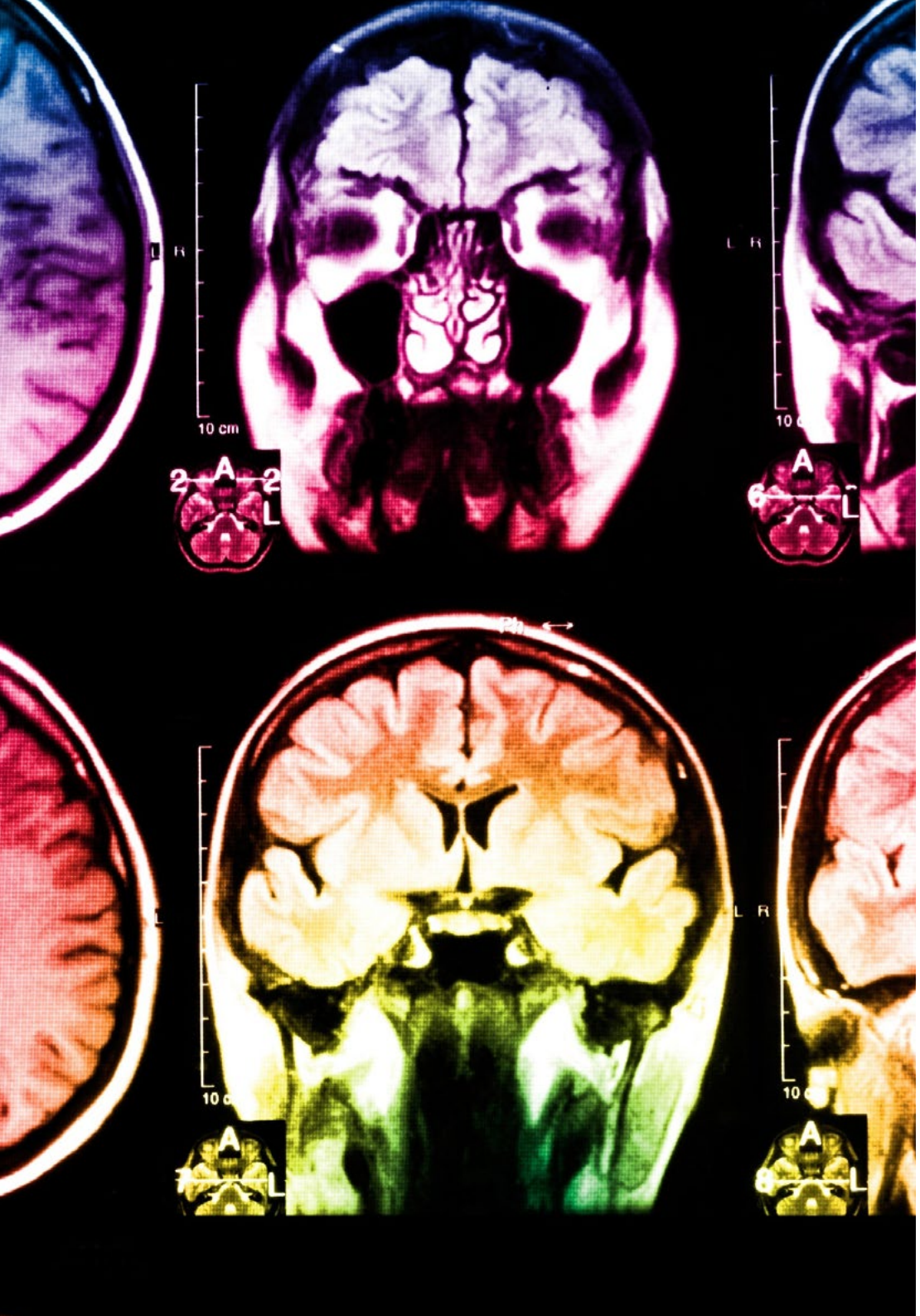
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

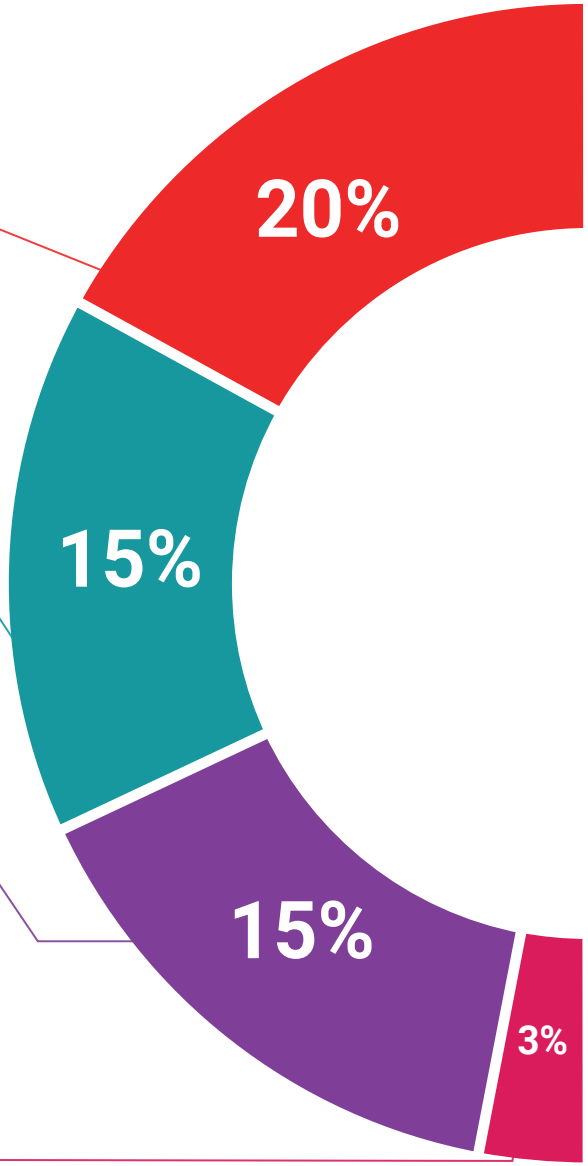
Interactive Summaries

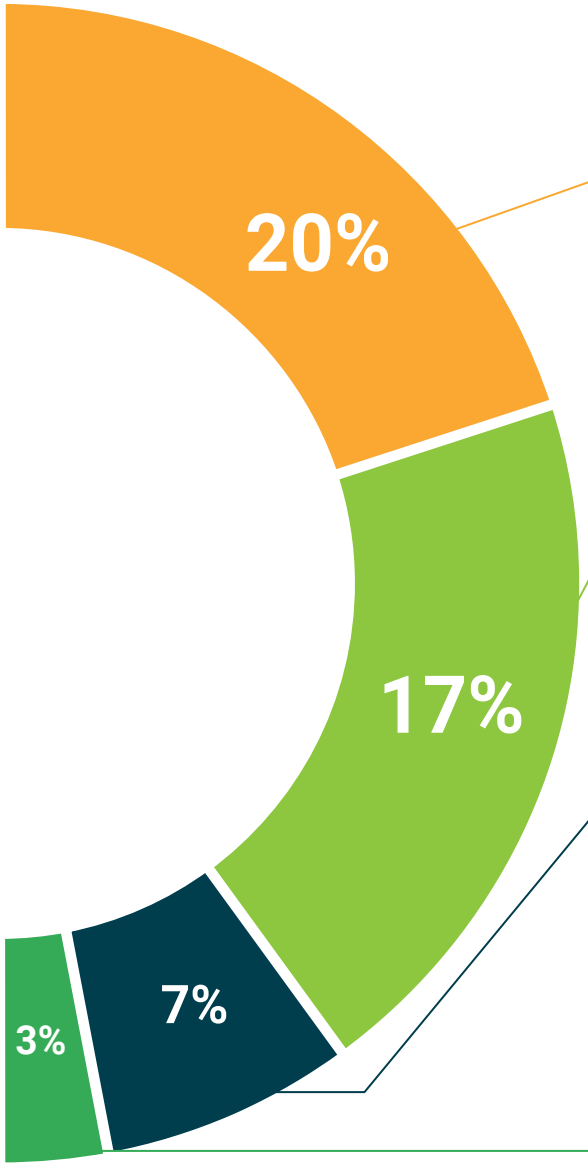
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Ventilation in a Highly Qualified IRCU 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 Ventilation in a Highly Qualified IRCU** 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 Ventilation in a Highly Qualified IRCU**

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 Ventilation in a Highly Qualified IRCU

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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