

Postgraduate Certificate Intermediate Respiratory Care Units (IRCU)





Postgraduate Certificate Intermediate Respiratory Care Units (IRCU)

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

Website: www.techtute.com/us/medicine/postgraduate-certificate/intermediate-respiratory-care-units-ircu

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01

Introduction

Thanks to the tireless scientific advancements, IRCU have experienced a significant evolution in recent years. These units have adopted innovative technologies and monitoring tools that allow for the optimization of patient monitoring and treatment for respiratory diseases, thereby reducing hospitalization times and expediting their recovery. Consequently, having an in-depth understanding of these devices is essential for specialists looking to stay completely up to date professionally. For this reason, TECH has created this program, through which the physician will identify advances in the technology used in IRCU or modern devices for monitoring and managing patient follow-up. Furthermore, they can complete this update 100% online and from their own home.





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With this Postgraduate Certificate, you will gain a deep understanding of the latest technologies used in IRCU for patient monitoring with complex conditions”

Intermediate Respiratory Care Units, which saw significant growth during the toughest phase of COVID-19, have become firmly established in the hospital environment due to their importance in effectively managing complex respiratory conditions. As a result, the procedures used to address complications, as well as the technologies employed in these areas, are continually being improved to maximize patient well-being. Given this context, specialists are obliged to stay informed about the cutting-edge advancements taking place in IRCUs to remain at the forefront of medicine.

For this reason, TECH Global University has focused its efforts on designing this program, through which the pulmonologist will delve into the current landscape of Intermediate Respiratory Care Units. Throughout this academic journey, they will explore the recent technologies used in these areas, learning about the indications and contraindications they present for various conditions. Additionally, they will identify the updated criteria for patient selection for admission to IRCUs or delve deeper into the innovative procedures for addressing respiratory, cardiovascular, or neurological complications associated with NIMV.

Since this qualification is delivered entirely online, the student can manage their study time as they see fit to efficiently update their professional knowledge. Likewise, they will have access to the most comprehensive educational materials, presented in formats such as readings, videos, or real case simulations. This way, they will have the flexibility to tailor their study to both their academic and personal needs.

This **Postgraduate Certificate in Intermediate Respiratory Care Units (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 experts in Upper Limb Surgery, Orthopedic Surgery, and Traumatology
- 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



This academic program will allow you to investigate the indications and contraindications of state-of-the-art IRCU technologies in different clinical contexts"

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Enjoy an academic experience led by pulmonologists with extensive professional experience in the best Intermediate Respiratory Care Units”

Update yourself from anywhere you want and at any time of the day through the 100% online mode of this Postgraduate Certificate.

Learn about the latest patient selection criteria for admission to the UCRI through this 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 students must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.



02 Objectives

The design of this Postgraduate Certificate has been carried out with the premise of favoring the pulmonologist's update regarding the operation and tools available in Intermediate Respiratory Care Units. Through this program, you will delve into the innovative technologies used in IRCUs, as well as the sophisticated procedures to address complications related to Non-Invasive Mechanical Ventilation. All of this in just 180 hours of study while enjoying a top-notch educational methodology.



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Obtain an updated understanding of the operation of Intermediate Respiratory Care Units and do not fall behind in the evolution of these areas”



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

- Analyze the role of IRCUs in the care and treatment of critically ill patients
- Gain in-depth knowledge of IRCU structure and design, coordination and collaboration mechanisms between different services
- Identify types of equipment and technologies available in IRCUs, along with their advantages and disadvantages
- Recognize the latest trends and advances in technology used in IRCUs
- Deepen understanding of prognostic scales used in NIMV
- Explore respiratory, cardiovascular, neurological, gastrointestinal, dermatological, and psychological complications in NIV and learn about updated protocols for managing them



Discover, through this course, the updated procedures to manage the different types of complications associated with the use of NIMV"

03

Course Management

In order to ensure top-quality education, TECH is committed to selecting the best educators to undertake the design of its academic programs. This way, this program will be taught by outstanding specialists in Pulmonology who have practiced in cutting-edge Intermediate Respiratory Care Units equipped with the most advanced technology. Therefore, the knowledge imparted to the students will have full professional applicability.





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Enjoy an update guided by specialists in Pneumology who actively perform their functions in excellent Intermediate Respiratory Care Units"

International Guest Director

With a relevant trajectory in the field of Pulmonology and Clinical Research, Dr. Maxime Patout distinguishes himself as an internationally renowned physician and scientist. As such, his involvement and contribution have led him to position himself as Clinical Director in Public Assistance in prestigious hospitals in Paris, standing out for his leadership in the management of Complex Respiratory Diseases. With this, it is worth mentioning his work as Coordinator of the Department of Functional Explorations of Breathing, Exercise and Dyspnea at the famous Hospital de la Pitié-Salpêtrière.

In the field of Clinical Research, Dr. Patout has made valuable contributions in leading areas such as Chronic Obstructive Pulmonary Disease, Lung Cancer and Respiratory Physiology. Accordingly, in his role as a Research Fellow at Guy's and St Thomas' NHS Foundation Trust, he has conducted groundbreaking studies that have expanded and improved the treatment options available to patients.

In this line, his versatility and leadership as a physician give him a vast experience in fields such as Biology, Physiology and Pharmacology of Circulation and Respiration. Therefore, he stands out as a renowned specialist in the Pulmonary and Systemic Diseases unit. In addition, his recognized competence in the Anti-Infectious Chemotherapy unit also places him as an outstanding reference in the field, being a regular advisor to future health professionals.

For all these reasons, his outstanding expertise in the field of Pulmonology has led him to be an active member of prestigious international organizations such as the European Respiratory Society and the French-Language Society of Pneumology, where he continues to contribute to scientific progress. So much so, that he shows an active participation in symposiums that enhance his medical excellence and constant updating in his field.



Dr. Patout, Maxime

- Clinical Director in Public Care at the Salpêtrière Hospital, Paris, France
- Clinical Research Fellow at Guy's and St Thomas' NHS Foundation Trust
- Coordinator of the Breathing, Exercise and Dyspnea Functional Examination
- Service at the Pitié-Salpêtrière Hospital
- Doctor of Medicine, University of Rouen
- Master's Degree in Biology, Physiology and Pharmacology of the Circulation and Respiration at the University of Paris
- University Expert in Pulmonary and Systemic Diseases from the University of Lille
- University Expert in Anti-infectious Chemotherapy, University of Rouen
- Medical Specialist in Pulmonology from the University of Rouen
- Member of: European Respiratory Society, French-language Society of Pneumology



Thanks to TECH, you will be able to learn with the best professionals in the world"

Management



Dr. Landete Rodríguez, Pedro

- Co-coordinator of the Basic Ventilation Department at La Princesa University Hospital
- Pulmonologist at La Princesa University Hospital
- Pulmonologist at Blue Healthcare
- Researcher in several research groups
- Professor in undergraduate and postgraduate university studies
- Author of numerous scientific publications in international journals and participant in several book chapters
- Speaker at international medical congresses
- Doctor Cum Laude by the Autonomous University of Madrid

Professors

Dr. González, Elizabeth

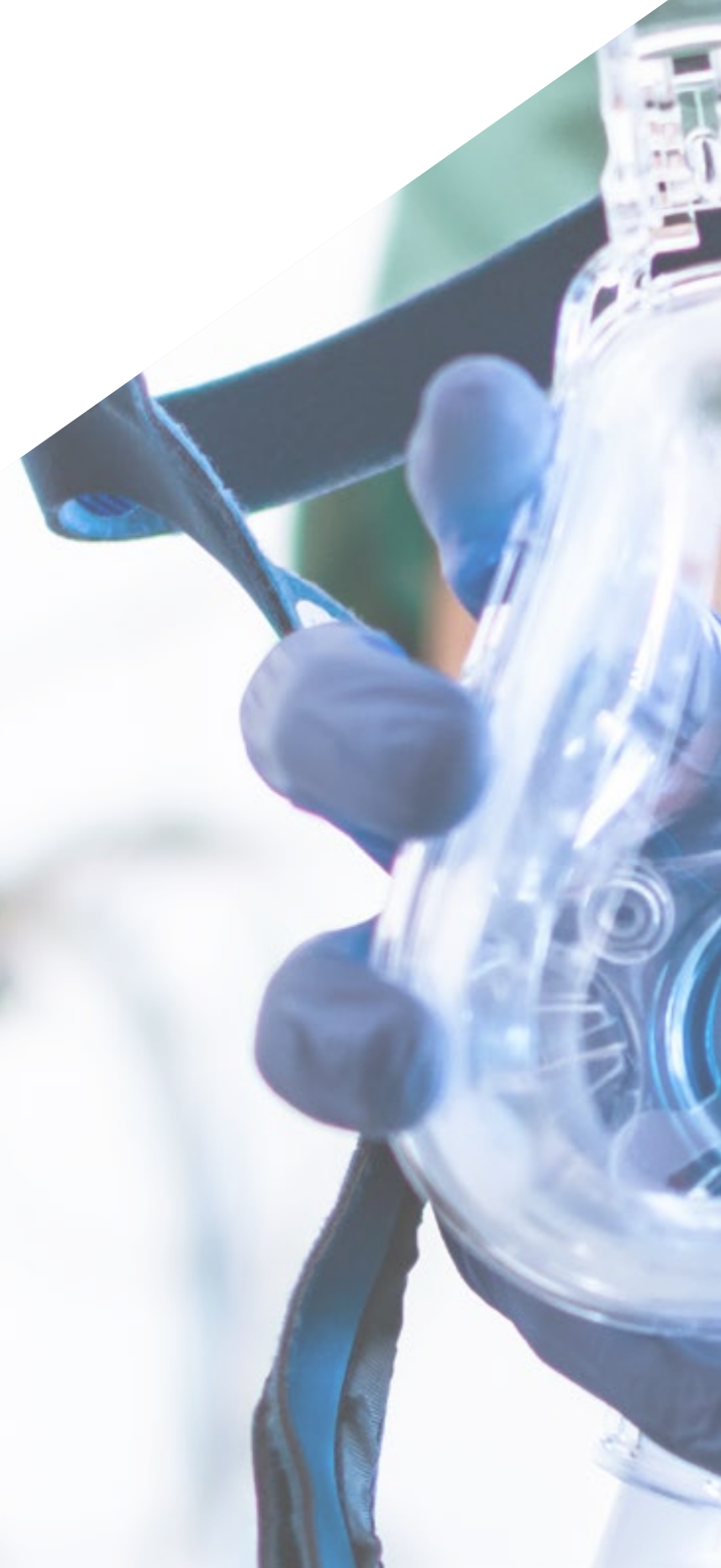
- Specialist in Pulmonology
- Head of Ward at the Hospital Universitario Clínico San Carlos, Respiratory Intermediate Care Unit, and the Ventilation Consultation for Chronic Patients
- Specialist in Pulmonology at the University Hospital of Getafe
- FEA of Pulmonology at the Hospital Universitario Clínico San Carlos
- Teacher in university studies



04

Structure and Content

The syllabus of this qualification has been designed with the aim of providing the specialist with the most up-to-date knowledge regarding the technology and organizational structure of Intermediate Respiratory Care Units. Each of its topics, through which the specialist will delve into the most relevant aspects in this field, are available in formats such as readings, explanatory videos, or self-assessment exercises. As a result, and following a 100% online modality, they will enjoy an engaging, personalized, and effective update.



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This qualification offers a top-tier syllabus, designed by specialists with decades of professional experience in cutting-edge Intermediate Respiratory Care Units”

Module 1. Intermediate Respiratory Care Units (IRCU)

- 1.1. Fundamentals and Objectives of the IRCUs
 - 1.1.1. Evolution Over Time
 - 1.1.2. Importance and Benefits
 - 1.1.3. Role of IRCUs in Public Health Management
- 1.2. Features and Organization of IRCUs
 - 1.2.1. Structure and Design
 - 1.2.2. Mechanisms of Coordination and Collaboration Among Various Services
 - 1.2.3. Development of Personalized Care Plans for Each Patient
 - 1.2.4. Assessment and Monitoring of Treatment Outcomes
- 1.3. Equipment and Technology in IRCUs
 - 1.1.1. Types of Equipment and Technologies Available in IRCUs
 - 1.1.2. Advantages and Disadvantages of Different Available Technologies
 - 1.1.3. New Trends and Advances in Technology Used in IRCUs
- 1.4. Healthcare Personnel in IRCUs: Functions and Competencies
 - 1.4.1. Professional Profile and Training Requirements for Health Professionals Working in IRCUs
 - 1.4.2. Competencies and Responsibilities of Various Members of Health Personnel
 - 1.4.3. Teamwork and Coordination Among Different Healthcare Professionals in IRCUs
 - 1.4.4. Continuing Education and Professional Development of Healthcare Personnel in IRCUs
- 1.5. Indications and Criteria in IRCUs
 - 1.5.1. Criteria for Patient Selection for Admission to IRCUs
 - 1.5.2. Admission Process and Assessment of Patient's Health Status
- 1.6. Monitoring and Follow-Up of Patients in IRCUs
 - 1.6.1. Capnography
 - 1.6.2. Continuous Pulse Oximetry
 - 1.6.3. Respiratory Software
- 1.7. Success and Failure Criteria in NIMV
 - 1.7.1. Prognosis Scales
 - 1.7.2. Factors Influencing the Success or Failure of NIMV
 - 1.7.3. Early Identification of NIMV Failures





- 1.8. Complications and Their Management in NIMV
 - 1.8.1. Respiratory Complications
 - 1.8.2. Cardiovascular Complications
 - 1.8.3. Neurological Complications
 - 1.8.4. Gastrointestinal Complications
 - 1.8.5. Dermatological Complications
 - 1.8.6. Psychological Complications
- 1.9. Pharmacological Treatments in IRCUs
 - 1.9.1. Nutrition and Nutritional Support
 - 1.9.2. Sedation and Analgesia in Patients with NIMV
 - 1.9.3. Other Medications in IRCUs
- 1.10. Discharge Criteria and Patient Follow-Up After Their Stay in IRCUs
 - 1.10.1. Assessment of Patient's Clinical Stability Before IRCU Discharge
 - 1.10.2. Discharge Planning and Patient Follow-Up
 - 1.10.3. Discharge Criteria for NIMV
 - 1.10.4. Outpatient Follow-Up After IRCU Discharge
 - 1.10.5. Assessment of Quality of Life After IRCU Stay



Take this TECH program and get up to date on IRCU operation with didactic contents in revolutionary formats such as video or interactive summary"

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 Certificate in Intermediate Respiratory Care Units (IRCU) guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This program will allow you to obtain your **Postgraduate Certificate in Intermediate Respiratory Care Units (IRCU)** 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.

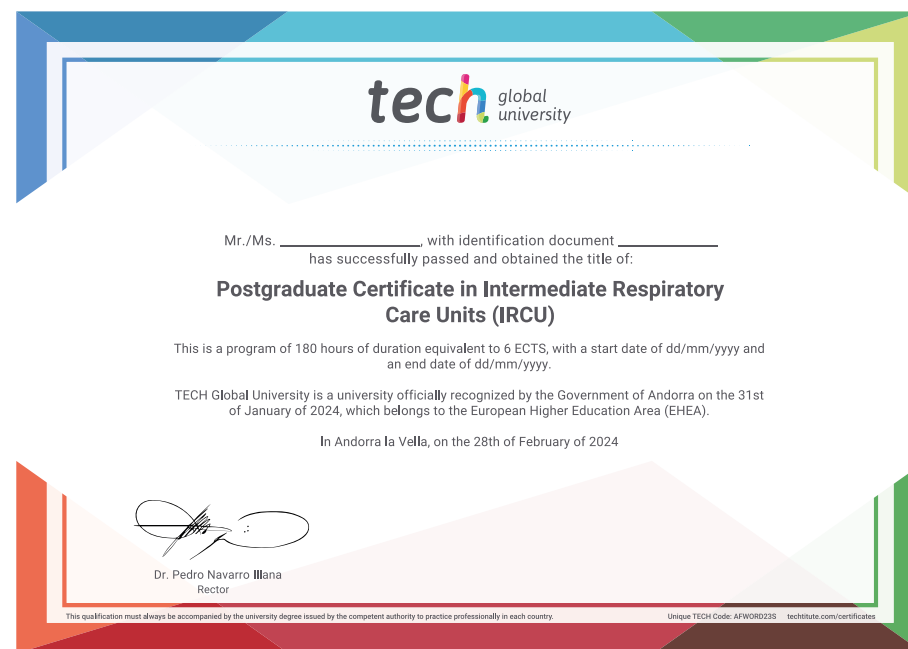
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Intermediate Respiratory Care Units (IRCU)**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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

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



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Care Units (IRCU)

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Postgraduate Certificate Intermediate Respiratory Care Units (IRCU)

