

# Postgraduate Certificate

## Indications and Contraindications of HBOT





## Postgraduate Certificate Indications and Contraindications of HBOT

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

Website: [www.techtute.com/us/physiotherapy/postgraduate-certificate/indications-contraindications-hbot](http://www.techtute.com/us/physiotherapy/postgraduate-certificate/indications-contraindications-hbot)

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01

# Introduction

In order to be able to work safely and successfully and take advantage of all the possibilities that Hyperbaric Oxygen Therapy offers, the physiotherapy professional needs to be perfectly aware of the indications and contraindications of this form of intervention. This comprehensive program offers the possibility to achieve this in just a few weeks of intensive education.





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*A Postgraduate Certificate that is absolutely essential to include the therapeutic benefits of HBOT in your physiotherapy activity"*

This Postgraduate Certificate will allow the student to know, in detail, the approved indications for this technique and to be able to apply the concepts of the physiological effects of HBOT in different illnesses. On the other hand, the professional will acquire the ability to carry out indications in different clinical cases, assess contraindications and make decisions in the face of the different adverse events that may arise during treatment.

This program includes practical and interactive activities, reaffirms the knowledge of approved indications, off-label indications and potential indications to be studied, according to the therapeutic benefits of HBOT. Therefore, contraindications of HBOT and adverse events are reaffirmed and emphasized, and safety work on HBOT is presented.

On the other hand, clinical cases extracted from the experience of different professionals and teachers of this Postgraduate Certificate are presented. With interactive resolution, the integration of the contents allows the professionals who completed the program to delve deeper or reaffirm some concepts and develop the expected or proven applications within their specialty and professional practice.

This **Postgraduate Certificate in Indications and Contraindications of HBOT** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in Hyperbaric Medicine
- 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
- News on Hyperbaric Medicine in the field of physiotherapy
- Practical exercises where the self-assessment process can be carried out to improve learning
- Special emphasis on innovative methodologies in Hyperbaric Medicine
- 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



*Don't miss the opportunity to Study at  
TECH Global University"*

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*This Postgraduate Certificate is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Indications and Contraindications of HBOT, you will obtain a diploma from TECH Global University"*

Its teaching staff includes professionals from the field of Hyperbaric Medicine, who bring to this program the experience of their work, 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Indications and Contraindications of HBOT.

*This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.*

*This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work while increasing your knowledge in this field.*



# 02 Objectives

The program in Indications and Contraindications of HBOT is oriented to prepare students in the fundamentals and applications of hyperbaric oxygen therapy and expose the scientific evidence in the different specialties in the field. In this sense, during the program, we will delve into the correct use of this type of treatment in rehabilitation sessions. In this way, you will become a much more competent and prepared professional to work as a physiotherapist in both public and private health institutions.







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*Get to know all the therapeutic aspects  
you need to know how to apply HBOT and  
achieve the best possible results”*



## General Objectives

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- Disseminate the usefulness of hyperbaric oxygen therapy in physiotherapeutic treatments
- Prepare physiotherapy professionals in the fundamentals, mechanisms of action, indications, contraindications and applications of hyperbaric oxygen
- Study the degree of evidence published and the recommendations and indications of the different scientific societies related to Hyperbaric Medicine in the field of physiotherapy
- Recognize the potential applications of hyperbaric oxygen in different clinical cases and the benefits that can be achieved with the treatment, as well as performing the indication and detection of the contraindications





## Specific Objectives

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- Study HBOT indications validated by the different societies of Hyperbaric Medicine and emerging indications based on the physiological therapeutic effects of HBOT
- Describe the adverse events that are expected from HBOT with different treatment pressures
- Present the contraindications of HBOT
- Discuss different clinical cases based on the integration of validated applications and the potential future applications of HBOT



*Update your knowledge through the Postgraduate Certificate in Indications and Contraindications of HBOT"*

03

# Course Management

The program's teaching staff includes leading experts in Hyperbaric Medicine who contribute their vast work experience to this program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary way and providing the physiotherapists with a series of transversal competencies that are crucial in their professional development and consolidation.



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*We have a team of specialists in the field of Hyperbaric Medicine that will help you become qualified in this field"*

## International Guest Director

Dr. Peter Lindholm is an eminence in Hyperbaric Medicine and the approach to Respiratory Disorders. His research has been focused on the Pathophysiology of Lung Diving, exploring topics such as Hypoxia and loss of consciousness.

Specifically, this expert has analyzed in depth the effects of the medical condition known as Lungsqueeze, frequent in divers. Among his most important contributions in this area is a detailed review of how glossopharyngeal breathing can extend lung capacity beyond normal limits. In addition, he described the first case series linking glossopharyngeal insufflation with cerebral gas embolism.

At the same time, he has been a pioneer in proposing the term Tracheal Squeeze as an alternative to pulmonary edema in divers who bleed after deep dives. On the other hand, the specialist has shown that exercise and fasting before diving increase the risk of loss of consciousness, similar to hyperventilation. In this way, he has developed an innovative method to use Magnetic Resonance Imaging in the diagnosis of Pulmonary Embolism. In the same way, he has delved into new techniques for measuring hyperbaric oxygen therapy.

Dr. Lindholm also serves as Director of the Endowed Gurnee Chair of Diving and Hyperbaric Medicine Research in the Department of Emergency Medicine at the University of California, San Diego, United States. Likewise, this renowned expert spent several years at Karolinska University Hospital. In that institution he worked as Director of Thoracic Radiology. He also has vast experience in diagnosis by means of clinical imaging based on radiation, and has even given lectures on the subject at the prestigious Karolinska Institute in Sweden. He is also a regular speaker at international conferences and has numerous scientific publications.



## Dr. Lindholm, Peter

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- Chair of Hyperpathic Medicine and Diving at the University of California, San Diego, United States
- Director of Thoracic Radiology at the Karolinska University Hospital
- Professor of Physiology and Pharmacology at Karolinska Institute in Sweden
- Reviewer for international scientific journals such as American Journal of Physiology and JAMA
- Medical Residency in Radiology at the Karolinska University Hospital
- Doctor of Science and Physiology, Karolinska Institute, Sweden

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

## Management



### **Dr. Cannellotto, Mariana**

- Medical Director of the network of Hyperbaric Medicine centers BioBarica Argentina
- Vice President of AAMHEI
- Specialist in Clinical Medicine
- Specialist in Hyperbaric Medicine, School of Medicine



### **Dr. Jordá Vargas, Liliana**

- Scientific Director of the Argentine-Spanish Association of Hyperbaric Medicine and Research (AAMHEI and AEMHEI)
- Scientific Director-BioBarica Clinical Research. International Network of BioBaric Hyperbaric Medicine Centers
- Degree in Biochemistry. National University of Córdoba, Argentina
- Microbiology Specialist
- Head of Microbiology, CRAI North, Cucaiba, Argentina





## Professors

### Dr. Verdini, Fabrizio

- Institutional Relations AAMHEI
- Clinical Doctor
- Diploma in Public Health Management
- Master's Degree in Healthcare Management

### Dr. Ramallo, Rubén Leonardo

- Director of the AAMHEI Medical Clinic Commission
- Specialist in Internal Medicine. Residency in Internal Medicine, Córdoba Hospital
- Medical Surgeon Faculty of Medical Sciences. National University of Córdoba. Argentina
- Master's Degree in Psychoimmunoneuroendocrinology. Favaloro University

### Dr. Emilia Fraga, Pilar María

- FINES Teacher
- AAMHEI Pedagogical Assistant

# 04

## Structure and Content

The structure of the content has been designed by the best professionals in the Hyperbaric Medicine sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to teaching. This will ensure that the knowledge you receive is based on experience and will equip you with the necessary skills to successfully practice the profession.





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*This Postgraduate Certificate in Indications and Contraindications of HBOT contains the most complete and up-to-date scientific program on the market”*

### Module 1. Indications and Contraindications of HBOT Integrative Module

- 1.1. Absolute and Relative Contraindications of HBOT
- 1.2. Adverse Effects of Hyperoxia
- 1.3. Neuronal and Pulmonary Oxygen Toxicity
- 1.4. Neurotoxicity/Neuroexcitability
- 1.5. Objective and Subjective Barotrauma
- 1.6. Special Care for Patients who Receive HBOT at Different Pressures
- 1.7. Indications by Consensus of the European Committee of Hyperbaric Medicine
- 1.8. Emerging Medical Applications: Off Label and Medicare Indications
- 1.9. Management in Hyperbaric Medicine Centers: HBOT in Public and Private Health
- 1.10. Cost-Benefit Relationship of the Application of HBOT: HBOT Cost Utility





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*This educational program will allow you to advance your career as a physical therapist in a convenient and compatible way"*

# 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. Physiotherapists/kinesiologists 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 of professional physiotherapy 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. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist 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.



*The physiotherapist/kinesiologist will learn through real cases and by solving 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 we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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 our 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 really 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.



#### Physiotherapy Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. 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 them as many times as you want.



#### 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.

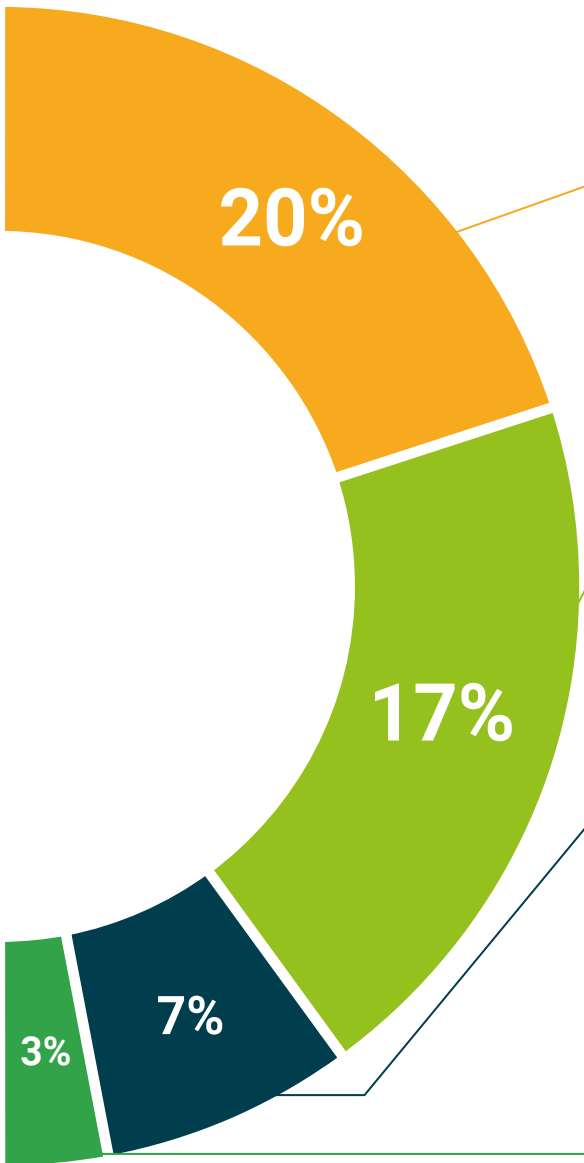
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### 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 Indications and Contraindications of HBOT guarantees students, in addition to the most rigorous and up-to-date education, access to a 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 Indications and Contraindications of HBOT** 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 Indications and Contraindications of HBOT**

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.





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