

Postgraduate Certificate Fundamentals of Hyperbaric Oxygenation Treatment (HBOT)



Postgraduate Certificate

Fundamentals of Hyperbaric Oxygenation Treatment (HBOT)

Course Modality: Online

Duration: 6 weeks

Certificate: TECH - Technological University

6 ECTS Credits

Teaching Hours: 150 hours.

Website: www.techtitute.com/us/medicine/postgraduate-certificate/fundamentals-hyperbaric-oxygenation-treatment-hbot

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01

Introduction

The different applications of Hyperbaric Medicine are not well known among health professionals, despite its effectiveness in certain treatments. Even so, there is currently a resurgence in the use of hyperbaric oxygenation treatment (HBOT) as an adjuvant tool in different medical specialties.



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Take advantage of the opportunity that this training gives you and improve your job skills with this Postgraduate Certificate in Fundamentals of Hyperbaric Oxygenation Treatment”.

The fundamentals of HBOT are presented in a practical, accessible and simple way to facilitate the study of the healthcare professional and to enable him/her to perform daily activities. The physical laws of Henry, Dalton, and Boyle and Mariotte are explained and reviewed again in order to incorporate the concept of volumetric and solometric effect.

The mathematical model of Krogh is also presented, which allows to know the oxygen perfusion radius effect at different treatment pressures.

The different types of hypoxia are detailed so that the student can understand the hypoxic bases of the different pathologies and recognize the therapeutic applications of hyperoxia. The incorporation of the physiological concept of dilute hyperoxia in plasma and interstitial fluids is the basis of hyperbaric oxygenation treatment.

In addition, a detailed knowledge of the fundamentals will provide insight into the limitations and applications of the different types of treatment pressure (high pressure, medium pressure, micropressure).

It should be noted that the onset of the concept of hyperoxia is what generates and triggers the entire cascade of therapeutic effects described in this training. Likewise, it should be taken into account that without the incorporation of this element, the initial basis of hyperbaric oxygenation, its indications, contraindications and adverse events cannot be recognized.

This Postgraduate Certificate in Fundamentals of Hyperbaric Oxygenation Treatment (HBOT) contains the most complete and up-to-date scientific program on the market.

The most important features of the program include:

- ♦ Development of practical cases presented by experts in Hyperbaric Medicine.
- ♦ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ Developments in Hyperbaric Medicine.
- ♦ 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 the largest private online university in the Spanish-speaking world".

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This course is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in the Fundamentals of Hyperbaric Oxygenation Treatment (HBOT), you will obtain a degree endorsed by TECH - Technological University".

It includes in its teaching staff professionals belonging to the field of Hyperbaric Medicine, who pour into this training the experience of their work, in addition to recognized specialists from reference societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the specialist must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Fundamentals of Hyperbaric Oxygenation Treatment (HBOT).

This training comes with the best didactic material, providing you with a contextual approach that will facilitate your learning.

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



02 Objectives

The Postgraduate Certificate in Fundamentals of Hyperbaric Oxygenation Treatment (TOHB) is oriented to train in the fundamentals and applications of hyperbaric oxygenation treatment and to expose the scientific evidence in the different specialties in the field of health.



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It is the best option to learn about the latest advances in hyperbaric medicine.



General Objectives

- Promote the usefulness of hyperbaric oxygenation treatment in different medical specialties.
- Train health professionals on the foundations, 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.
- Recognise 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

- ◆ To train in fundamentals of hyperbaric oxygenation treatment (HBOT) and the mechanisms to achieve hyperoxia.
- ◆ Present the intervening physical laws and the Krogh mathematical model which substantiates the effect of the treatment at different pressures..
- ◆ Describe the differences between the volumetric and solumetric effect of HBOT and its limitations in the treatment of different diseases.
- ◆ Present the types of hypoxia described and the scenarios of hypoxia-related disorders in different pathologies.

04

Course Management

The program's teaching staff includes leading experts in Hyperbaric Medicine who contribute their vast work experience to this training program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.



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Leading professionals in the field have come together to teach you the latest advances in Hyperbaric Medicine”.

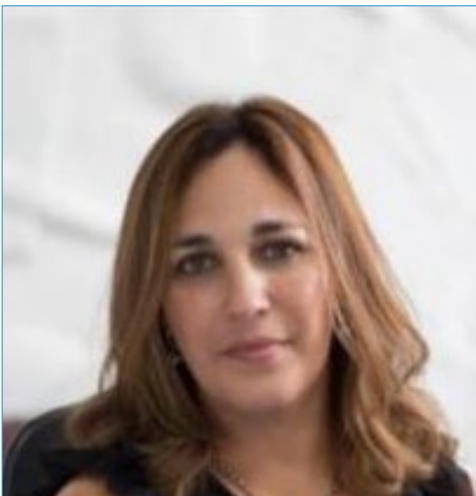
Management



Dr. Cannellotto, Mariana

- ♦ President of AAMHEI Biobarica Medical Director
- ♦ Specialist in Hyperbaric Medicine, Medical Clinic

Codirector



Dr. Jordá Vargas, Liliana

- ♦ Degree in Clinical Biochemistry
- ♦ Microbiology
- ♦ Scientific Director of AEMHEI and AAMHEI
- ♦ Biobarica Scientific and Clinical Research Director



Teachers

Dr. Emilia Fraga, Pilar María

- ◆ FINES Teacher
- ◆ AAMHEI Pedagogical Assistant.

Dr. López Jiménez, Elías

- ◆ Degree in Medicine at Madrid Complutense University
- ◆ Specialist in Radiotherapeutic Oncology via RMI, La Princesa Hospital.

Dr. Navarro Viltre, Bárbara Ivonne

- ◆ Deputy of the Emergency Department of the General Hospital of Catalonia.
- ◆ Specialist in Family and Community Medicine.
- ◆ Head of Hyperbaric Medicine unit at Catalonia Hospital.

Dr. Ramallo, Rubén Leonardo

- ◆ Master in Psychoneuroimmunoendocrinology.
- ◆ Biobarica Medical Doctor Núñez and Larrea.
- ◆ Director of the AAMHEI Medical Clinic Commission.

Dr. Romero-Feris, María Delfina

- ◆ President of AEMHEI
- ◆ Biobaric Medical Director Spain

Dr. Verdini, Fabrizio

- ◆ Diploma in Public Health Management.
- ◆ Master's Degree in Healthcare Management.

05

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.





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This Postgraduate Certificate in Fundamentals of Hyperbaric Oxygenation Treatment (HBOT) contains the most complete and up-to-date scientific program on the market.

Module 1. Foundations of the Hyperbaric Oxygenation Treatment (HBOT)

- 1.1. Physiological Basis of Hyperbaric Oxygenation Treatment.
- 1.2. Dalton, Henry, Boyle and Mariotte Physical Laws.
- 1.3. Physical and Mathematical Bases of the Diffusion of Oxygen within Tissue in the Different Treatment Pressures. Krogh Model
- 1.4. Physiology of Oxygen.
- 1.5. Physiology of Respiration
- 1.6. Volumetric and Solometric Effect.
- 1.7. Hypoxia Types of Hypoxia.
- 1.8. Hyperoxia and Treatment Pressure.
- 1.9. Hyperoxia Effective in Wound Healing.
- 1.10. Bases of the Intermittent Hyperoxia Model.





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This training will allow you to advance in your career comfortably”

05

Methodology

This training program provides you with a different of learning. Our methodology follows a cyclical process: ***Re-learning***.

This teaching system is used 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 Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a of learning that has proven to be extremely effective, especially in subjects that require memorization".

At TECH we use the Case Method

In a given situation, what would you do? Throughout the program training, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you can experience a of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gervas, 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 potential 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 professional medical 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 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 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.



Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.



The physician 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning 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 (we 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.



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

We present 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, international guides. in our virtual library you will have access to everything you need to complete your training.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our future difficult decisions.



Quick Action Guides

We offer you the most relevant contents of the course in the of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06 Certificate

This Postgraduate Certificate in Fundamentals of Hyperbaric Oxygenation Treatment (HBOT) guarantees you, in addition to the most rigorous and up-to-date training, the access to a Postgraduate Certificate issued by **TECH - Technological University**.



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Successfully complete this training and receive your university degree without travel or laborious paperwork”.

This **Postgraduate Certificate** in Fundamentals of Hyperbaric Oxygenation Treatment (HBOT) contains the most complete and up-to-date scientific program on the market.

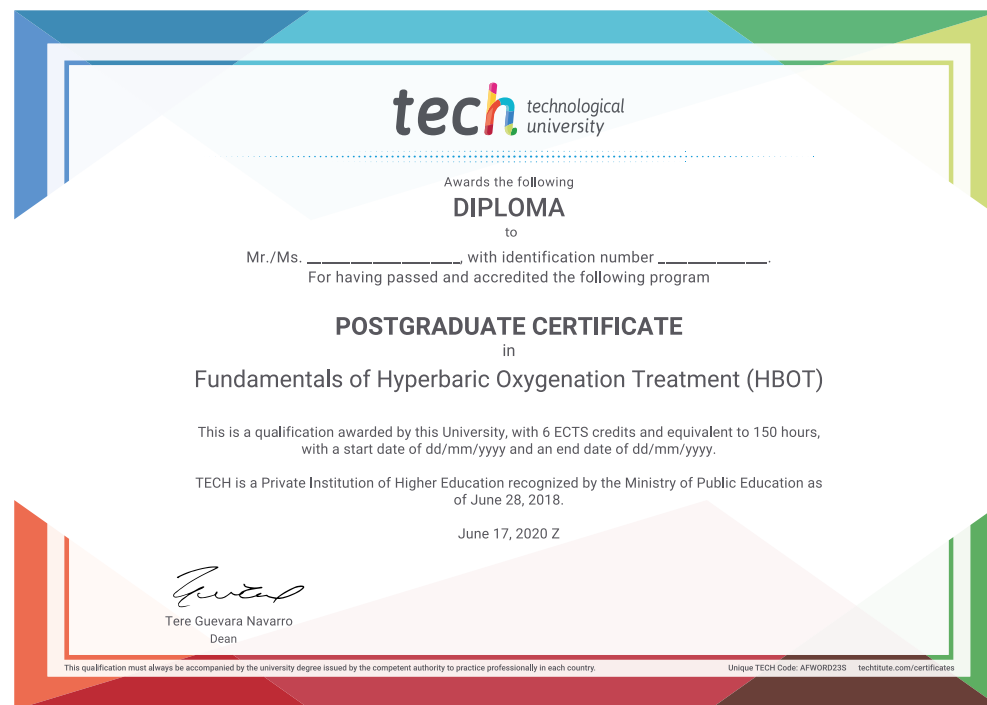
After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH - Technological University** via **tracked delivery**.

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

Title: **Postgraduate Certificate in Fundamentals of Hyperbaric Oxygenation Treatment (HBOT)**

ECTS: **6**

Official Number of Hours: **150**



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

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



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