

# Professional Master's Degree

Update on Anesthesiology  
and Resuscitation





## Professional Master's Degree Update on Anesthesiology and Resuscitation

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/professional-master-degree/master-update-anesthesiology-resuscitation](http://www.techtute.com/us/medicine/professional-master-degree/master-update-anesthesiology-resuscitation)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Skills

---

*p. 12*

04

Course Management

---

*p. 16*

05

Structure and Content

---

*p. 26*

06

Methodology

---

*p. 32*

07

Certificate

---

*p. 40*

# 01

# Introduction

Progress in surgery requires anesthesia and resuscitation techniques to be adapted to new procedures, as well as to technical and pharmacological innovations. But the speed at which these take place, and the number of scientific papers published every day on them, make it impossible for specialists to reconcile the update with their clinical practice. This program offers you the opportunity to achieve this through the latest educational technology, ensuring perfect compatibility between your personal life and the achievement of your educational goals. A unique opportunity to take a leap in level.





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*New scenarios in anesthesiology drive us to propose new specialization programs that meet the real needs of experienced professionals, so that they can incorporate new advances into their daily practice"*

Anesthesiology, Resuscitation and Pain Therapy, as a medical specialty, has undergone significant development in the last 20 years. Pharmacological and biotechnological advances, intraoperative and postoperative monitoring, imaging techniques and new safety paradigms, as well as sub-specialization by specific fields, have contributed decisively to this transformation.

Currently, the privileged position of the anesthesiologist in each of the phases (pre, intra and postoperative) of the surgical process, places us as key figures in the development and enhancement of perioperative medicine, ensuring the linear and continuous management of the patient, and facilitating the sequencing of actions and clinical implementations whose ultimate goal is the early and safe reincorporation of the patient to their environment.

On the other hand, assimilating the advances that have taken place in the specialty in recent times requires an effort in the training of professionals. This specialization program is aimed at guiding the anesthesiological strategy and perioperative care of patients in an individualized, effective and safe manner.

A compendium and deepening of knowledge that will lead you to excellence in your profession.



*With this Professional Master's Degree, you will be able to balance high intensity training with your personal and professional life, achieving your goals in a simple and effective way"*

This **Professional Master's Degree in Update on Anesthesiology and Resuscitation** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The latest technology in online teaching software
- ♦ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ♦ Practical cases presented by practicing experts
- ♦ State-of-the-art interactive video systems
- ♦ Teaching supported by telepractice
- ♦ Continuous updating and recycling systems
- ♦ Autonomous learning: full compatibility with other occupations
- ♦ Practical exercises for self-evaluation and learning verification
- ♦ Support groups and educational synergies: questions to the expert, debate and knowledge forums
- ♦ Communication with the teacher and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ Supplementary documentation databases that are permanently available, even after the program

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*A high-quality specialization program that will enable you to become a highly competent professional working in the field of Anesthesiology and Resuscitation”*

The collaborators on this Professional Master's Degree are professionals in the sector who will provide you with the greatest compendium of knowledge in both scientific and purely technical disciplines.

In this way we ensure that we deliver the educational update we are aiming for. A multidisciplinary team of professionals who are trained and experienced in different environments who will deliver the theoretical knowledge in an efficient way, but above all, who will bring the practical knowledge from their own experience to the program: one of the differential qualities of this training.

This mastery of the subject is complemented by the effectiveness of the methodological design for this Professional Master's Degree in Update on Anesthesiology and Resuscitation. Developed by a multidisciplinary team of experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice learning: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

*The learning experience on this Professional Master's Degree follows the most developed didactic methods in online teaching to guarantee your efforts lead to the best results possible.*

*Our innovative telepractice concept will give you the opportunity to learn through an immersive experience, which will provide you with a faster integration and a much more realistic view of the contents: Learning from an Expert.*



# 02 Objectives

The Professional Master's Degree in Update on Anaesthesiology and Resuscitation offers detailed information on the most relevant advances in the specialty from an eminently practical point of view, in a time where accredited knowledge is essential, including the latest technological advances and medication.

The objective of this program is to offer professionals who work in an Anesthesiology and Resuscitation laboratory, the knowledge and skills required to perform their duties using the latest and most advanced protocols and techniques.





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*Learn from the best and study the techniques and work procedures of Anesthesiology and Resuscitation to be able to work in the best laboratories in the sector”*



## General Objectives

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- Update specialist knowledge of the different medical-surgical subspecialties of this discipline, through evidence-based medicine
- Promote work strategies based on a perioperative approach of the patient and multimodal rehabilitation as a reference model for achieving excellent care
- Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training
- Encourage professional stimulation through continued specialization and research



*A boost to your professional profile that will provide you with the competitiveness of the best prepared professionals in the labor market"*





## Specific Objectives

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- Review the peculiarities of pain and its management in the child. Ultrasound as a new tool
- Use intraoperative monitoring with PtiO<sub>2</sub> and Indocyanine green in aneurysms and arteriovenous malformations
- To review new strategies in the management of traumatic brain injury
- Reflecting on the anesthetic approach to bariatric surgery
- Learn about the special considerations in airway management in the patient with acute spinal cord injury
- Review concepts: hyperalgesia, hyperexcitability, neuromodulation, transition from acute to chronic pain
- Incorporate questionnaires, self-recording, health monitoring systems and other novel pain assessment tools, such as computerized quantitative sensory assessment, infrared thermography, as well as other instruments for assessing the intensity and other components of pain
- Incorporate the new contributions in imaging techniques (CT TAC-MRI, scintigraphy, SPECT, SPECT-CT) in the diagnosis and treatment of chronic pain
- Learn about the main characteristics of the new adjuvants in the treatment of chronic pain
- Use ultrasound to guide invasive techniques in chronic pain management
- Review the techniques of diagnostic epiduroscopy, adhesiolysis, holmium laser, radiofrequency and epiduroscopy as components of the treatment of chronic low back pain
- Learn about the latest developments in thermal, pulsed and cold radiofrequency
- Incorporate the main applications in the treatment of chronic pain: percutaneous facet denervation, sacroiliac denervation technique, discogenic treatments, joint radiofrequency, radiofrequency of peripheral nerves and ganglia
- Identify the indications for intrathecal administration of drugs for the treatment of chronic pain and spasticity

# 03 Skills

This Professional Master's Degree in Update on Anesthesiology and Resuscitation has been created as a high-level training tool for professionals. Its intensive program that will prepare students to be able to adequately intervene in the different areas of work in this field. A comprehensive body of knowledge that will provide you with the most up-to-date skills to act safely and competently in all procedures in this field of work.





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*This complete Professional Master's Degree will provide you with the essential personal and professional skills to work in a clinical analysis laboratory and compete at a higher level”*



## General Skills

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- Develop within the profession in terms of working with other health professionals, acquiring skills to work as a team
- Recognize the need to maintain your professional skills and keep them up to date, with special emphasis on autonomous and continuous learning of new information
- Develop the capacity for critical analysis and research in the field of their profession

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*Seize the moment and take the step to get up to speed on the latest developments in anesthesiology, resuscitation and pain management”*





## Specific Skills

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- Describe the implications of anesthesiology in perioperative processes, and incorporate patient expectations about clinical safety and pain management
- Proper management of fluid therapy in hemodynamic optimization and new drugs used in the anesthesia process
- Value research as the only way to progress in anesthesiology
- Identify the main characteristics of advances in thoracic anesthesia
- Point out the implications of specific advances in anesthesia for surgical techniques in thoracic interventions
- Identify the main characteristics of advances in cardiovascular anesthesia
- Point out the specific implications of advances in anesthesia for diagnostic and therapeutic techniques commonly used in cardiovascular pathology
- Perform preoperative assessment of the patient's airway and its possible consequences in the establishment of intubation devices
- Incorporate new techniques for the management of mechanical ventilation during patient intervention and extubation procedures, and assess and anticipate special risk situations that may arise during the process
- Identify the implications of psychology as preparatory work for surgery in pediatric patients
- Describe the main diagnostic and therapeutic procedures in child surgery and incorporate the advances that have been established in recent years
- Incorporate the latest advances in analgesia in labor procedures and identify the consequences of optimizing therapeutic techniques for the woman and child
- Associate new developments in anesthetic procedures to the approach to cesarean section, intrauterine surgery and oncological surgical procedures
- Point out the main pathology characteristics affecting pregnant women
- Describe the main characteristics of multimodal rehabilitation and its implications in the management of abdominal surgery
- Incorporate the latest advances in urological surgery into surgical practice
- Point out new trends in neuroanesthesia and neuroprotection, and incorporate new developments in neuromonitoring and intraoperative and postoperative analgesia in neurosurgery
- Describe the advances in diagnostic and therapeutic techniques most commonly used in neurocritical patients
- Describe the most important considerations in the approach to the critical patient with non-delayed care pathologies
- Point out the appropriate anesthetic procedures in the management of the critically ill patient
- Identify the latest advances in locoregional anesthesia and their implication in clinical practice
- Determine the techniques and devices used in locoregional anesthesia procedures, as well as their possible complications and future prospects
- Incorporate the latest advances in the therapy of different types of pain
- Describe the main characteristics of the techniques and procedures in the management of the patient with pain

04

# Course Management

Within the concept of total quality of our program, we are proud to put at your disposal a Teaching Staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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*An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during the training: A unique opportunity not to be missed”*

## International Guest Director

Dr. Betelehem M. Asnake is a leading anesthesiologist with an extensive international career, noted for her commitment to health equity and medical education. She has practiced in San Francisco, California, at Kaiser Permanente Medical Centers in Oakland and Richmond. In addition, she has held an important role as Director of Global Health Initiatives at UCLA Health, considered one of the best hospitals in the United States, and ranked first in both California and Los Angeles in a comprehensive assessment of excellence in patient care.

In addition to her clinical practice, she has been recognized for her passionate work in coaching and promoting diversity in Medicine. In this regard, she has founded MuluMentor, a virtual platform designed to support medical students from underrepresented and disadvantaged backgrounds. This program has facilitated the connection between these students and healthcare professionals in reviewing medical school applications, preparing for the MCAT and obtaining letters of recommendation. In this way, the platform has had a significant impact on inclusion and support for future physicians.

In turn, Dr. Betelehem M. Asnake has been a key international figure in bridging educational gaps in the field of Anesthesia. In fact, she has worked as a facilitator of the SAFE course in Tanzania, teaching safe anesthesia in remote areas. She has also been a co-leader of COVID-19 response teams and has collaborated with the World Society of Anesthesia in the development of international standards of post-anesthesia care. In addition, her role as a peer reviewer for the COVID-19 Repository for Ethiopian Health Professionals has highlighted her commitment to the global improvement of medical education in low-resource settings.



## Dr. Asnake, Betelehem M.

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- ♦ Director of Global Health Initiatives at UCLA Health, Southern California, United States
- ♦ General Anesthesiologist at UCLA Health
- ♦ General Anesthesiologist at Kaiser Permanente Oakland and Richmond Medical Centers
- ♦ Founder of MuluMentor
- ♦ General Anesthesiologist at Zuckerberg General Hospital and Trauma Center
- ♦ Global Health Equity Fellow at Zuckerberg General Hospital & Trauma Center
- ♦ Anesthesiology Specialist from the University of California
- ♦ PhD in Medicine from the University of Virginia
- ♦ M.S., Pharmacology and Toxicology from the University of Virginia  
B.A., French Studies from the University of California

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

## Management



### Dr. Muedra Navarro, Vicente

- ♦ Head of the Anesthesia Service at the General University Hospital Consortium of Valencia
- ♦ Professor-Doctor of Anesthesiology at the University of Valencia
- ♦ Degree in Medicine from the University of Valencia
- ♦ MIR Specialist in Anesthesiology, Resuscitation and Pain Therapeutics at the La Fe University Hospital, Valencia
- ♦ Professor of the Department of Biomedical Sciences. Faculty of Medicine, CEU Cardenal Herrera University, Valencia
- ♦ Director of doctoral theses and Master's Degree theses
- ♦ Member of several Health Care Improvement Commissions at La Ribera University Hospital
- ♦ University Expert in the Comprehensive Management of the Airway, by the Catholic University of Valencia
- ♦ Vice-president of the Department of Anesthesiology and Critical Care in Cardiac Surgery of the Valencian Community
- ♦ Member of the Spanish Society of Anesthesiology, Resuscitation and Pain Therapy
- ♦ Member of the Spanish Society of Multimodal Rehabilitation
- ♦ Principal Investigator in a Consolidated Research Group, with competitive funding from Public Agencies (Instituto de Salud Carlos III-Ministry of Health, and Fundación para el Fomento de la Investigación Sanitaria y Biomédica de la Comunidad Valenciana-Consellería de Sanitat
- ♦ Collaborating Researcher in the Prometeo Program for research groups of Excellence in the Department of Education and Science at Generalitat Valenciana
- ♦ Research member of the Translational Medicine Doctoral Program in the research line Multidisciplinary Intervention in Prevention and Clinical Therapeutics of International Doctoral School CEINDO

## Professors

### Dr. Aparicio Chagoyen, Rosa

- ♦ Anesthesiology and Resuscitation Service, La Fe University Hospital, Valencia
- ♦ Degree in Medicine and Surgery from the University of Valencia

### Dr. Belltall Olmos, Amparo

- ♦ Resident Physician specializing in Anesthesiology and Resuscitation, Hospital Universitario y Politécnico La Fe, Valencia

### Dr. Bermejo Marín, Ara

- ♦ Assistant Physician in the Pain Unit, Hospital Universitario i Politécnic La Fe, Valencia
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- ◆ Graduate in Medicine, Faculty of Medicine, Valencia

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- ◆ Specialist in Anesthesiology, Resuscitation and Pain Therapy, De la Ribera University Hospital
- ◆ Degree in Medicine and Surgery, Valencia



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**Dr. Lázaro Alcay, Juan José**

- ♦ Head of the Anesthesiology Department, Sant Joan de Dèu Hospital, Barcelona
- ♦ Medical Specialist in Anesthesiology, Resuscitation and Pain Therapy

**Dr. López García, Andrés**

- ♦ Specialist in Anesthesiology and Resuscitation

**Dr. López Gómez, María Amparo**

- ♦ Specialist in Anesthesiology, Resuscitation and Pain Therapy, La Fe Polytechnic and University Hospital, Valencia

**Dr. Llobell Sala, Francisca María**

- ♦ Specialist physician in Anesthesiology, Resuscitation and Pain Therapy, Denia Hospital

**Dr. Llau, Juan Vicente**

- ♦ Graduate in Medicine (Valencia-Spain)
- ♦ Anesthesiologist (MIR) La Fe Hospital (Valencia-Spain) 1989-1992
- ♦ Anesthesiology and Post-surgery Department Critical Care, Doctor Peset University Hospital, Valencia

**Dr. López Alvarez, Servando**

- ♦ Master's Degree in Physiopathology and Pain Treatment, Autonomous University of Barcelona
- ♦ A Coruña University Hospital Complex

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- ♦ Chief of the Anesthesia and Resuscitation Service Surgical Services Coordinator, La Ribera University Hospital, Alzira

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- ♦ Section Chief of the Pain and Major Outpatient Surgery Unit, Del Mar Hospital Barcelona

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- ♦ Department of Anesthesiology Madrid Montepíncipe University Hospital, Madrid

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- ♦ Health-Economic Assistance for Employees and Workers, Mutuality de Previsión Social (ASEPEYO)
- ♦ Anesthesia Service

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- ♦ Specialist in Anesthesia, Resuscitation and Chronic Pain Management, ASEPEYO Hospital, Coslada, Madrid

**Dr. Pajares Moncho, María Azucena**

- ♦ Degree in Medicine and Surgery, University of Valencia (1991)
- ♦ Specialist in Anesthesiology, Resuscitation and Pain Therapy (1993-1996)
- ♦ Clinical Chief of the Anesthesiology and Resuscitation Department Cardio-Thoracic Anesthesia and Circulatory Assistance Area
- ♦ Anesthesiology and Resuscitation Service La Fe Polytechnic University Hospital, Valencia

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- ♦ Associate Professor, Faculty of Medicine, CEU San Pablo University
- ♦ Department of Anesthesiology Madrid Montepíncipe Univeristy Hospital, Madrid

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- ♦ Anesthesia Department, Bidaosa Regional Hospital, Spain

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- ♦ Anesthesia Service, 9 de Octubre Hospital

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- ♦ Specialist in Anesthesiology, Resuscitation and Pain Therapy, Alzira- Ribera University Hospital, Valencia

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- ♦ Anesthesiology, Resuscitation and Pain Therapy Department, Miguel Servet University Hospital, Zaragoza

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- ♦ Assistant Physician, Anesthesia and Critical and Surgical Care Service, La Paz Children's Hospital





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- ♦ National Center for Electron Microscopy (CNME) (UCM)-Organic and Functional Anatomy (UFV)

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**Dr. Valdés Vilches, Luís**

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- ♦ Head of the Department of Anesthesiology, La Fe Polytechnic and University Hospital, Valencia
- ♦ Medical Specialist in Anesthesiology, Resuscitation and Pain Therapy

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- ♦ Specialist in Pre-anesthesia, Anesthesia and Resuscitation
- ♦ Member of the Andalusian-Extremadura Association of Anesthesiology and Resuscitation (AAEAR)
- ♦ Member of the Spanish Society of Anesthesiology and Resuscitation (SEDAR)
- ♦ Member of the Sevillian Professional Association of Anesthesiologists and Resuscitators (APSAR)

**Dr. Yerga Pozo, Guadalupe**

- ♦ Specialist in Anesthesiology and Resuscitation, Virgen del Rocío University Hospital, Seville

**Dr. Zarragoikotxea Jauregui, Iratxe**

- ♦ Anesthesiology, Resuscitation and Pain Therapy Department, Hospital Universitario y Politécnico La Fe, Valencia

05

# Structure and Content

The contents of this program have been developed by the different experts on this course with a clear purpose: to ensure our students acquire each and every one of the necessary skills to become true experts in this field.

A complete and well-structured program that will take you to the highest standards of quality and success.



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*This Professional Master's Degree in Update on Anesthesiology and Resuscitation contains the most complete and updated scientific program on the market”*

### Module 1. Latest Advances in Anesthesiology

- 1.1. Perioperative Medicine and Multimodal Rehabilitation: Future of Anesthesiology
- 1.2. Hemodynamic Optimization and Target-Guided Fluid Therapy
- 1.3. Clinical Simulation as a Teaching Tool in Postgraduate Education
- 1.4. Evidence-Based Medicine (EBM) in Anesthesiology
- 1.5. Contributions of Anesthesiology to Current Patient Expectations: Clinical Safety, Pain Treatment
- 1.6. Pharmacological Developments in Anesthesiology
- 1.7. Perioperative Hemorrhage. Preoperative Optimization, Monitoring and New Transfusion Strategies
- 1.8. Research as a Source of Progress in Anesthesiology
- 1.9. New Antiplatelet and Anticoagulant Drugs. Involvement in Anesthetic Practice

### Module 2. Cardiovascular Anesthesia

- 2.1. Cardiovascular Anatomy and Physiology
- 2.2. Advanced Hemodynamic and Neurological Monitoring in Cardiovascular Procedures
- 2.3. Transesophageal Echocardiography in Cardiovascular Surgery
- 2.4. Management of Hemostasis and Transfusion Therapy in Cardiovascular Surgery
- 2.5. Updates on the Management of Extracorporeal Circulation (ECC)
- 2.6. Coronary Revascularization Surgery
- 2.7. Aortic Valve Surgery
- 2.8. Mitral Valve Surgery
- 2.9. Minimally Invasive Cardiac Surgery Multimodal Handling
- 2.10. Updates in Anesthesia for Cardiovascular Procedures Outside the Operating Room
- 2.11. Updates in the Management of Thoracic Aortic Pathology
- 2.12. Updates in Anesthesia for the Placement and Management of Ventricular Assist Devices
- 2.13. Updates in Surgery on the Pericardium
- 2.14. Updates in Pediatric Cardiac Surgery
- 2.15. Anesthetic Management of Patients with Congenital Heart Disease Undergoing NonCardiac Surgery
- 2.16. Updates in Vascular Surgery
- 2.17. Comprehensive Management of the Cardiac Transplant Patient

### Module 3. Pediatric Anesthesia

- 3.1. Assessment of the Child's Behavior and Strategies to Minimize Stress and Anxiety During Induction of Anesthesia
- 3.2. Preanesthesia Visit in Pediatrics
- 3.3. Fluid and Hemotherapy in Pediatrics
- 3.4. Anesthetic Monitoring in Pediatric Surgery
- 3.5. Difficult Airway in Pediatric Surgery
- 3.6. Perioperative Management of Associated Pathology
- 3.7. Neonatal and Infant Anesthesia
- 3.8. Ultrasound
- 3.9. General Anesthesia in Pediatric Surgery
- 3.10. Anesthesia Outside the Operating Room
- 3.11. Pain in the Child

### Module 4. Obstetric Anesthesia

- 4.1. Analgesic Update in Labor and Delivery
- 4.2. Anesthesia for Cesarean Section
- 4.3. VAD During Pregnancy
- 4.4. CPR in Pregnant Women
- 4.5. Intrauterine Fetal Surgery and Anesthesia
- 4.6. Hypertensive Disorders of Pregnancy
- 4.7. Obstetric Hemorrhage
- 4.8. Cardiopathic Pregnant Woman
- 4.9. Amniotic Fluid Embolism
- 4.10. Maternal Sepsis and Septic Shock
- 4.11. Non-obstetric Surgery in the Pregnant Patient
- 4.12. Anesthesia for Gynecologic and Oncologic Patients
- 4.13. Anesthesia in Breast Cancer

## Module 5. Digestive and Urological Anesthesia

- 5.1. Principles of Multimodal Rehabilitation
  - 5.1.1. Introduction to Multimodal Rehabilitation Programs
  - 5.1.2. ERAS Perioperative Program
  - 5.1.3. Hemodynamic Optimization. FGO
- 5.2. Anesthesia in Digestive System Surgery
  - 5.2.1. Colorectal Surgery
  - 5.2.2. Endocrine and Pancreatic Surgery
  - 5.2.3. Esophagogastric Surgery
  - 5.2.4. Bariatric Surgery
  - 5.2.5. Liver Transplant
  - 5.2.6. Liver Surgery
- 5.3. Urologic Surgery
  - 5.3.1. Prostate Surgery
  - 5.3.2. Radical Cystectomy
  - 5.3.3. Renal Surgery
  - 5.3.4. Renal Transplant

## Module 6. Neuroanesthesia

- 6.1. New Developments in Brain Protection. Pharmacological and Non-Pharmacological Measures
- 6.2. Hemostasis and Neuroanesthesia
- 6.3. Advances in Intraoperative and Critical Multimodal Neuromonitoring
- 6.4. Perioperative Management of Pain in the Neurosurgical Patient
- 6.5. Updates in the Management of Supratentorial and Infratentorial Tumors
- 6.6. Anesthesia for Craniotomy in the Awake Patient
- 6.7. Anesthesia in Deep Brain Stimulation
- 6.8. Anesthesia for Neuroendoscopic Surgery
- 6.9. Anesthesia for Pituitary and Skull Base Surgery
- 6.10. Advances in Neuroanesthesia and Critical Care in Neurovascular Pathology
- 6.11. Advances in Anesthesia for Interventional Neuroradiology
- 6.12. Advances in the Treatment of Traumatic Brain Injury and Intracranial Hypertension
- 6.13. Advances in Acute Spinal Cord Injury
- 6.14. Advances in Neuroanesthesia and Neurocritical Care in Pediatrics

## Module 7. Latest Advances in the Critically Ill Patient

- 7.1. Approach to the Neurocritical Patient
- 7.2. Management of the Patient with Acute Respiratory Insufficiency (ARI)
- 7.3. Approach to the Patient in a Situation of Cardiogenic Shock
- 7.4. Right Ventricular Dysfunction and Pulmonary Hypertension
- 7.5. Infections in the Critically Ill Patient
- 7.6. Congenital Heart Disease in Adults
- 7.7. Nuevos Sistemas de Ventilación Mecánica en las Unidades de Críticos
- 7.8. Echocardiographic Hemodynamic Evaluation in Critically Ill Patients
- 7.9. Management of the Patient with Hemorrhagic Shock
- 7.10. Management of Adult Respiratory distress (ARDS)
- 7.11. Mechanical Ventilation
- 7.12. Postoperative Management of Left Ventricular Assists
- 7.13. Multi-Organ Donor Maintenance
- 7.14. Enteral and Parenteral Nutrition in the Critically Ill Patient
- 7.15. Sepsis and Septic Shock
- 7.16. Comprehensive Management of Renal Transplantation
- 7.17. Comprehensive Management of Lung Transplantation
- 7.18. Acute and Chronic Kidney Failure
- 7.19. Comprehensive Approach to the Polytraumatized Patient
- 7.20. Comprehensive Approach to the Burn Patient
- 7.21. Advanced CPR

## Module 8. Pain Therapeutics

- 8.1. Pain Neurobiology
- 8.2. Psychological Assessment of the Patient with Pain Advances in Psychological Intervention and Treatment Techniques
- 8.3. Opioids. Clinical Use, Addiction and Abuse
- 8.4. Acute Postoperative Pain. New Treatment Perspectives
- 8.5. Pain Management in Palliative Care Patients
- 8.6. New Perspectives in Neurostimulation in the Treatment of Chronic Low Back Pain
- 8.7. Algorithms in the Treatment of Neuropathic Pain
- 8.8. Updates in Oncologic Pain
- 8.9. Ultrasound in Interventional Treatments in Pain Units
- 8.10. Conventional Radiofrequency and Pulsed Radiofrequency in the Treatment of Spine Pain
- 8.11. Rehabilitative Therapy in Pain Management

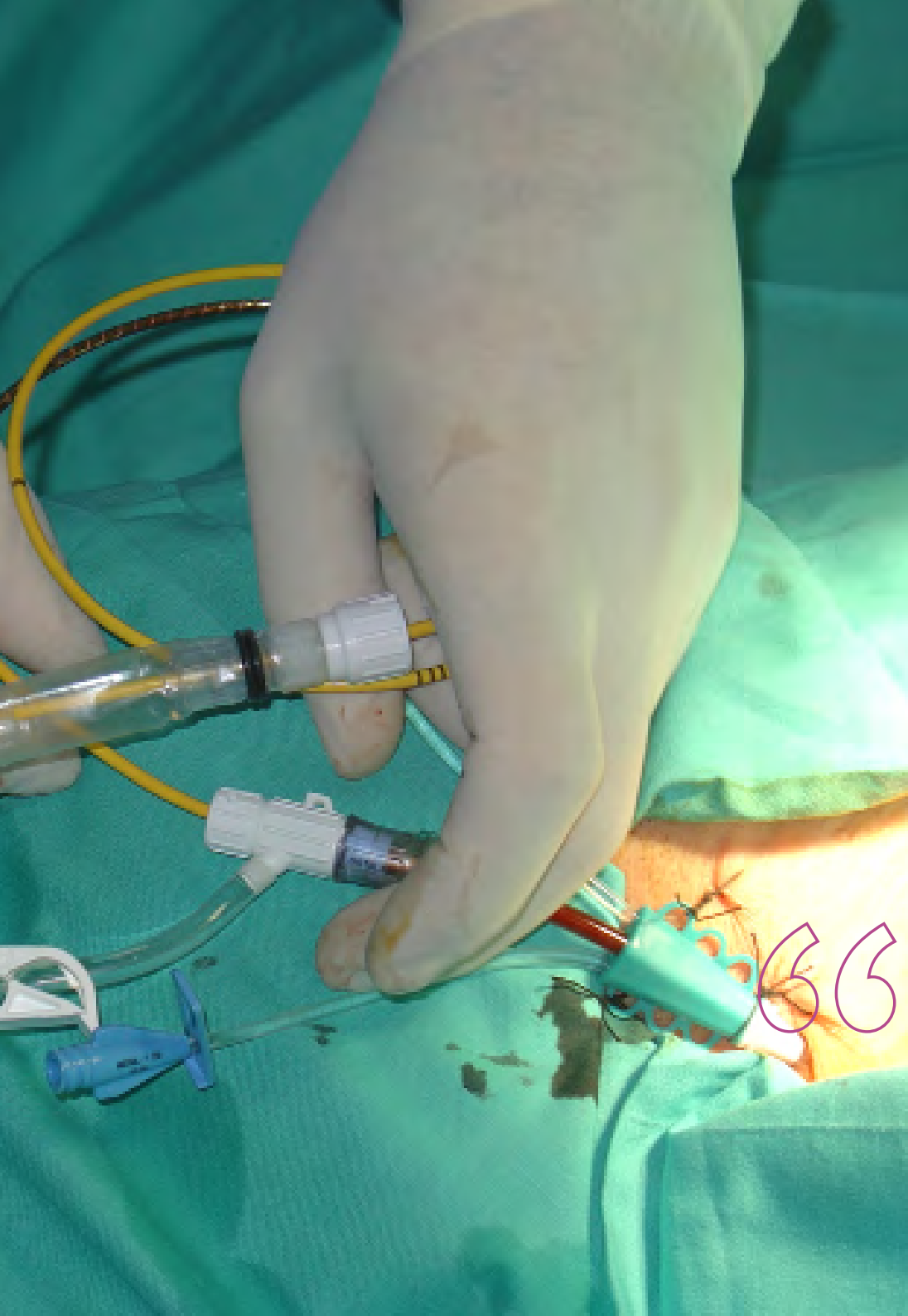
## Module 9. Regional Anesthesia

- 9.1. Pharmacology of Local Anesthetics. General Information on Anesthetic Blocks
- 9.2. Basis of Neurostimulation and Ultrasonography
- 9.3. Macroscopic Anatomy of the Cervical and Brachial Plexus
- 9.4. Microanatomy of the Meninges. Microanatomy of the Nerves. Interactive 3D Reconstruction of the Spine and its Contents Applied to Regional Anesthesia
- 9.5. Regional Upper Limb Techniques. Superficial Cervical Plexus Block. Brachial Plexus Approaches Above the Clavicle: Interscalenic Approach. Supraclavicular Approach
- 9.6. Regional Upper Limb Techniques. Brachial Plexus Approaches Under the Clavicle: Parasagittal-Paracoid Infraclavicular Approach. Infraclavicular Costoclavicular-Medioclavicular Approach
- 9.7. Brachial Plexus Approach at the Axillary Level: Blockage of the Terminal Branches of the Brachial Plexus Suprascapular Nerve Block and Axillary Nerve Block
- 9.8. Regional Techniques for the Lumbar Plexus: Posterior Approach: Psoas Block. Anterior Approach: Femoral Nerve Block. Obturator Nerve Block. Lateral Femoral Cutaneous Nerve Block. Genitocrural Nerve Block. Blockage of the Internal Saphenous Nerve (Adductor Canal)



- 9.9. Regional Techniques for the Sacral Plexus. Sciatic Nerve Block at Parasacral Level. Sciatic Blockage at Gluteal Level. Blockage of the Sciatic Nerve at the Subgluteal-Mediofemoral Level. Sciatic Nerve Block at Popliteal Level. Blockage of the Terminal Branches of the Sciatic Nerve: Posterior Tibial Nerve, Common Peroneal Nerve, Deep Peroneal Nerve and Sural Nerve
- 9.10. Chest: PEC I-II. BRILMA (Blockage of the Lateral Cutaneous Branches of the Intercostal Nerves): Paravertebral Block
- 9.11. Abdomen: Blockage of the Ilioinguinal and Iliohypogastric Nerves: TAP Quadratus Lumborum Block. Locking of the Rectus Sheath
- 9.12. Anesthesia and Analgesia, Subarachnoid, Epidural and Caudal. General Information, Anatomy, Technique, Mechanism of Action, Indications, Contraindications and Complications
- 9.13. Ultrasound in Neuroaxial Blocks

“*A unique, key, and decisive experience to boost your professional development*”



06

# Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

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.





“

*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 relearn). 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.



07

# Certificate

The Professional Master's Degree in Update on Anesthesiology and Resuscitation guarantees you, in addition to the most rigorous and updated training, access to a Professional Master's Degree issued by TECH Global University





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*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This private qualification will allow you to obtain a **Professional Master's Degree diploma in Update on Anesthesiology and Resuscitation** 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.

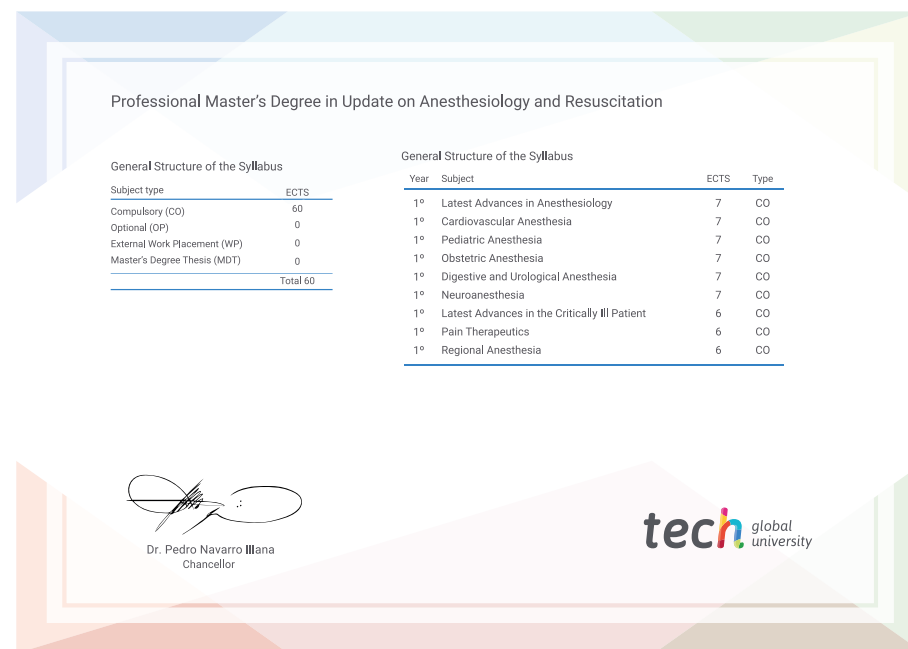
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Update on Anesthesiology and Resuscitation**

Modality: **online**

Duration: **12 months**

Accreditation: **60 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.



## Professional Master's Degree

Update on Anesthesiology and Resuscitation

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

# Professional Master's Degree

Update on Anesthesiology  
and Resuscitation

