

# Postgraduate Diploma

## Urgent Therapeutic Management of the Poisoned Patient



## Postgraduate Diploma Urgent Therapeutic Management of the Poisoned Patient

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 19 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-urgent-therapeutic-management-poisoned-patient](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-urgent-therapeutic-management-poisoned-patient)

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# 01

# Introduction

Toxicology is an area in constant evolution, so the specialist must keep up to date in order to be able to make an accurate evaluation and prognosis of the patient. Toxicological syndromes are varied and at the moment of attending an emergency, quick and accurate decisions must be made. In response to this need, TECH has developed this academic program with a complete syllabus on the assessment of the poisoned patient and its therapeutic management. An academic itinerary that will allow them to obtain the most updated tools and knowledge from the hands of experts. Its 100% onlinemodality provides them with the convenience and freedom to choose the best time and place of study according to their current agenda. An excellent formula for personal and professional growth.



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*With this Postgraduate Diploma you will be up to date with the most advanced procedures in Emergency Therapeutic Management of the Poisoned Patient"*

This Postgraduate Diploma is necessary for the Physician who is familiar with the fundamentals of Toxicology, since the extension of the program will provide them with a very broad guide of action protocols to solve in a practical way any situation in this area. Although the field of knowledge covered by Toxicology is very broad, the objective of this program is to provide specialists with sufficient knowledge to assess the poisoned patient and address the ideal protocols in each emergency.

This academic space is fundamentally directed to the daily practice of the profession, referring to the study of those toxins that come into contact with patients more frequently, minimizing as much as possible the theoretical foundations of the subject and focusing on the clinical care of the poisoned patient. Through a variety of exemplary real cases, given by the experienced teachers who have been involved in its development.

At the same time, special importance is given to the study of each toxin, so that the physician knows at all times to assess the importance of the patient's condition and to approach their treatment with guaranteed success. The contents of this postgraduate diploma are structured in 4 large groups of topics with a pedagogical coherence.

Any physician who wants or needs to acquire solid knowledge in Toxicology will find in this program all the material they need to get up to date in terms of life support, diagnosis and specific treatment of poisoned patients, with an extensive list of complementary aspects that make up the most exclusive teaching load. A complete program, available 100% online and through the most secure, dynamic and intuitive platform, which will allow them to complete it in 6 months or 475 hours of study.

This **Postgraduate Diploma in Urgent Therapeutic Management of the Poisoned Patient** 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 Toxicology in the Emergency Room
- ♦ 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 the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*A complete program that covers the medical-legal aspects of toxicological care in the emergency department"*



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*This program will provide a greater sense of security in the performance of your daily practice”*

*Take the opportunity to learn about the latest advances in urgent therapeutic management of the poisoned patient and improve the care of your patients.*

*The most exclusive and modern online teaching methodology that only TECH can offer you.*

The program includes in its teaching staff professionals of the field 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 immersive training programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, in which the professional will have to try to solve the different professional practice situations that will arise throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.



# 02 Objectives

The Postgraduate Diploma in Urgent Therapeutic Management of the Poisoned Patient is aimed at facilitating the physician's actions in all types of patients at serious toxicological risk or with acute intoxication. For this reason, it includes a wide syllabus with all the most relevant and updated aspects of assessment and life support, from emergencies, to situations with toxic substances, psychotropic drugs, stings or animal bites, among others.





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*Update your knowledge with the  
Postgraduate Diploma in Urgent  
Therapeutic Management of the  
Poisoned Patient"*



## General Objectives

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- Define the basic and general principles of care for the severely poisoned patient
- Identify the main toxics available in our environment
- Describe the main signs and symptoms related to severe acute poisoning and its organ involvement
- Implement mechanisms to protect the severely poisoned patients and those around them
- Detect complications related to the related toxicant or to the patient's health status
- Explain the process of care, diagnosis and treatment of the severely poisoned patient in all its dimensions

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*You will have a teaching team ready to help you with any doubts you may have”*





## Specific Objectives

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### Module 1. Assessment of the Poisoned Patient

- ♦ Explain the decontamination procedures in acute dermal poisoning
- ♦ Define the toxicity mechanisms in the men's and female genitourinary tract
- ♦ Identify the effects of xenobiotics
- ♦ Describe the ECG alterations in poisonings that produce cardiac involvement
- ♦ Recognize the possible arrhythmias to be detected in acute poisonings
- ♦ Manage the hematological involvement that occurs in acute poisonings

### Module 2. Therapeutic Management of the Poisoned Patient: Life Support

- ♦ Undertake Screening Procedures for Patients with Smoke Inhalation Poisoning
- ♦ Determine the therapeutic approach to be carried out in the patient poisoned by inhalation of fumes or other respiratory agents
- ♦ Establish the differential diagnosis between the different toxic renal syndromes
- ♦ Identify the clinical pictures that can occur in poisoning with neurological involvement
- ♦ Describe the systemic repercussion of eye poisoning
- ♦ Know those toxic substances that cause hepatic affectation and its repercussion at the organic level
- ♦ Assess violent and self-injurious behaviors in relation to psychiatric toxicology

### Module 3. Therapeutic Management of the Poisoned Patient: Specific Treatment

- ♦ Determine the organic repercussions of Toxicology in athletes and the different products used
- ♦ Assess poisoning related to possible pharmacological errors in the pediatric patient
- ♦ Apply specific protocols to be followed in case of overdose in pregnant women
- ♦ Locate the principles of teratogenesis and all those products that can produce it
- ♦ Master products that may pose a risk of poisoning to both the mother and the newborn during breastfeeding
- ♦ Examine the epidemiology, etiology and repercussions of acute poisonings in pediatric and neonatal age
- ♦ Diagnose the characteristics of intentional and unintentional poisoning in the elderly

### Module 4. Therapeutic Management of the Poisoned Patient: Additional Aspects

- ♦ Evaluate the toxicokinetics of paracetamol, antihistamines and decongestants and protocols for their management
- ♦ Recognize the toxicokinetics of antifungal and anti-inflammatory drugs and therapeutic strategies against them
- ♦ Examine the toxicokinetics of opioids, bisphosphonates and antineoplastics and their treatment in case of acute poisoning
- ♦ Determine the toxicokinetics of antiepileptics, antidiabetics and hypoglycemic agents and their appropriate clinical approach



# 03

# Course Management

With the support and guidance of the most renowned professionals specialized in Urgent Therapeutic Management of the Poisoned Patient, the graduate will be able to achieve their goal of academic updating without complications and with the quality they deserve. There will be 475 hours of 100% online study where the graduate will acquire new skills in this field. With a complete and updated content elaborated by teachers of national and international importance, who give an invaluable contribution to the academic program. Personalities of the health sector and specific areas with numerous research articles, developed works and relevant projects.



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*With a high level teaching staff  
you will be updated on the latest  
evidence in Toxicology”*



## International Guest Director

Dr. Alan Wu is a true international eminence in the field of Toxicology and Clinical Chemistry. His research has earned him numerous awards and, specifically, he has been recognized as one of the 10 most important people in the world of In Vitro Diagnostic technology (IVD Industry). He also holds the Seligson-Golden Award and has received an award for Outstanding Contributions from the American Association of Clinical Chemistry. He has also been nominated for the Charles C. Shepard Award for Science, Laboratory and Methods (CDC/ATSDR).

This outstanding expert has been closely linked to the Laboratory of Toxicology and Clinical Chemistry of the San Francisco General Hospital, United States, where he has been its director. In this renowned institution he has developed some of his most important studies, among them, his approaches to cardiac biomarkers and point-of-care testing. In addition, he is responsible for the supervision of the staff, the approval of all tests and instruments used in this center and for ensuring compliance with the standards established by the regulatory agencies.

Dr. Wu also maintains a continuous commitment to the dissemination of scientific discoveries and contributions derived from his research. He has authored more than 500 peer-reviewed articles published in leading journals. He has also written 8 pocket books consisting of short stories designed to promote the value of the clinical laboratory to the general public.

As for his academic background, he received his PhD in Analytical Chemistry and completed a postdoctoral fellowship in Clinical Chemistry at Hartford Hospital. He is also certified by the American Board of Clinical Chemistry and is listed as a State Advisor on environmental biomonitoring and chemical-biological terrorism.



## Dr. Wu, Alan

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- ♦ Director of Toxicology and Clinical Chemistry, San Francisco General Hospital, United States
- ♦ Head of the Clinical Pharmacogenomics Laboratory at the University of California San Francisco (UCSF)
- ♦ Professor of Laboratory Medicine at UCSF
- ♦ Director of the Neonatal Screening Program at the Department of Public Health in Richmond
- ♦ Former Director of Clinical Pathology in the Department of Pathology and Laboratory Medicine at Hartford Hospital
- ♦ Medical Advisor to the California State Poison Control Center
- ♦ State Advisor to the Environmental Biomonitoring Committee and the Terrorism Preparedness Committee
- ♦ Advisor to the Clinical Laboratory Standards Institute, Subcommittee on Establishment of Molecular Methods in Clinical Laboratory Settings
- ♦ Editor-in-Chief of the journal *Frontiers in Laboratory Medicine*
- ♦ Bachelor of Science in Chemistry and Biology from Purdue University
- ♦ Ph.D. in Analytical Chemistry from the University of Illinois
- ♦ Postdoctoral Fellow in Clinical Chemistry at Hartford Hospital
- ♦ Member of:
  - ♦ American Association for Clinical Chemistry
  - ♦ International Warfarin Pharmacogenetics Group Warfarin Consortium
  - ♦ International Tamoxifen Pharmacogenetics Consortium
  - ♦ College of American Pathologists, Division of Toxicology Resources



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

## Management



### Dr. Álvarez Rodríguez, Cesáreo

- Emergency Physician Head of the Emergency Unit of Verín Hospital
- Chairman of the Research and Teaching, Ethics and Medical Records Committee Verín Hospital
- Coordinator of the Toxicology Working Group of SEMES Galicia
- Scientific Secretary of the Galician Society of Emergency Medicine (SEMES Galicia)
- Vice-Secretary for Training of the Spanish Society of Emergency Medicine (SEMES)
- Director of Doctoral Thesis in the area of Clinical Toxicology (Extraordinary Award)
- Resident Intern. Virgen de la Concha General Hospital of Zamora
- Specialist in the Emergency Department Virgen de la Concha General Hospital of Zamora
- Resident Intern. Professional School of Sports Medicine of the University of Oviedo
- Primary Care Physician SERGAS
- PhD in Medicine and Surgery from the Autonomous University of Madrid
- Degree in Medicine and Surgery from the University of Santiago de Compostela with a Bachelor's Degree in Medicine and Surgery
- Physical Education and Sports Medicine Professional School of Sports Medicine of the University of Oviedo
- Research Sufficiency by the University of Salamanca
- Specialist in Family and Community Medicine
- Postgraduate Diploma in Health Promotion
- Advanced Life Support Instructor (American Heart Association Accredited)
- Member of the Editorial Board of the journal "Emergencias"

## Professors

### Dr. Burillo-Putze, Guillermo

- ♦ Specialist in Family and Community Medicine
- ♦ Researcher of the Department of Physical and Pharmacological Medicine of the University of La Laguna
- ♦ Former Coordinator of the Emergency Department of the University Hospital Complex of the Canary Islands
- ♦ Doctor in Medicine and Surgery from the University of La Laguna.
- ♦ Postgraduate Diploma in Toxicology by the University of Seville
- ♦ Advanced Life Support Instructor Course of the School of Clinical Toxicology of Washington, USA
- ♦ Member of: European Register of Toxicologists and Spanish Association of Toxicology

### Dr. Bajo, Angel Ascensiano

- ♦ Hospital Emergency Physician at the University Health Care Complex of Salamanca
- ♦ Associate Professor of Emergency Medicine at the University of Salamanca
- ♦ PhD in Medicine from the University of Salamanca
- ♦ Degree in Medicine and Surgery from the University of Salamanca.
- ♦ Certified in Emergency Medicine by the Spanish Society of Emergency Medicine (SEMES)
- ♦ Member of Clinical Toxicology Section of the Spanish Association of Toxicology (AETOX), Clinical Toxicology Working Group of the Spanish Society of Emergency Medicine (SEMETOX), European Association of Poison Control Centres and Clinical Toxicology (EAPCCT) and Founder of the Spanish Foundation of Toxicology (FETOC)

### Mr. Carnero Fernandez, César Antonio

- ♦ Deputy Inspector of National Police
- ♦ Specialist in narcotic intoxication in the TEDAX-NRBQ Unit

### Dr. Giralde Martínez, Patricia

- ♦ Prehospital Emergency Physician in the Galician 061 Health Emergency Service
- ♦ Hospital Emergency Physician at the Montecelo Hospital
- ♦ Postgraduate University Professor in the course "Postgraduate Diploma in Urgencies and Emergencies" of the School of Health Sciences of the Complutense University of Madrid
- ♦ General Vice-Secretary of the Galician Society of Emergency Medicine (SEMES Galicia)
- ♦ Member of Scientific Committee of the XXI Conference on Clinical Toxicology and XI Conference on Toxicovigilance
- ♦ Graduate in Medicine and Surgery from the University of Santiago de Compostela
- ♦ Specialist in Family and Community Medicine
- ♦ Master's Degree in Emergencies and Catastrophes by the University CEU San Pablo

### Dr. Maza Vera, María Teresa

- ♦ Undersecretary of Accreditation and Quality of SEMES
- ♦ Specialist in Hospital Emergency Medicine at the Álvaro Cunqueiro Hospital of Vigo
- ♦ Member of the Toxicology Working Group of SEMES Galicia
- ♦ Coordinator of the Scientific Committee of the XXIV Autonomic Congress SEMES Galicia
- ♦ Specialist in Family and Community Medicine
- ♦ Diploma of Advanced Studies in Health Sciences from the University of Vigo

**Dr. Miguéns Blanco, Iria**

- ♦ Doctor at the Emergency Department of the Gregorio Marañón General University Hospital
- ♦ Specialist in Prehospital Emergency Medicine in the Emergency Service of the Community of Madrid-SUMMA
- ♦ Specialist in Family and Community Medicine
- ♦ Graduate in Medicine and Surgery from the University of Santiago de Compostela
- ♦ Master's Degree in Emergency Medicine from the Complutense University of Madrid.
- ♦ Master's Degree in Teaching and Digital Skills in Health Sciences by Cardenal Herrera CEU University
- ♦ Master's Degree in Healthcare Law and Bioethics from the University of Castilla-La Mancha
- ♦ SEMES national board member and director of Mujeres SEMES

**Dr. Mayan Conesa, Plácido**

- ♦ Emergency Coordinator at University Clinical Hospital of Santiago
- ♦ Emergency Physician at the University Hospital Complex of La Coruña
- ♦ Reviewer of the journal Emergencias
- ♦ Teacher of Advanced Life Support
- ♦ Graduate in Medicine and Surgery from the Universidad de Navarra
- ♦ Specialist in Family and Community Medicine
- ♦ Diploma of Advanced Studies from the University of La Coruña
- ♦ Member of SEMES (board of directors)

**Mr. Rodríguez Domínguez, José María**

- ♦ TEDAX-NRBQ Specialist in the TEDAX-NRBQ Unit of the National Police
- ♦ TEDAX-NRBQ teacher for national and international organizations
- ♦ Degree in Biology from the University of Santiago de Compostela

**Dr. Suárez Gago, María del Mar**

- ♦ Assistant Physician of the Emergency Department of the Verín Hospital
- ♦ Member of the Toxicology Working Group of SEMES Galicia
- ♦ Specialist in Internal Medicine
- ♦ VMER (Medical Emergency and Resuscitation Vehicle) accreditation of the Training Center of the National Institute of Medical Emergencies of Oporto (INEM)
- ♦ Degree in Medicine and Surgery University of the Basque Country





# 04

# Structure and Content

This educational program of 4 learning modules consists of a study methodology based on Relearning. The way in which the contents are presented allows a much faster assimilation of the concepts, making the system effective to advance naturally and progressively towards the goal. In only 6 months of study, the graduate will be up to date with the latest and most relevant aspects of the latest scientific evidence regarding the Urgent Therapeutic Management of the Poisoned Patient. Thanks to its 100% online format, they will be able to complete the course at their own pace, resulting in greater organizational autonomy.



A glass jar containing white pills is visible on a laboratory bench in the background. The image is split diagonally into a blue upper right section and a white lower left section.

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*Enjoy the most updated syllabus  
in the assessment of the poisoned  
patient in a completely online way”*

## Module 1. Assessment of the Poisoned Patient

- 1.1. Introduction to the Module
  - 1.1.1. Medical History
    - 1.1.1.1. Medical History
    - 1.1.1.2. Physical Examination
    - 1.1.1.3. Complementary Evaluations
  - 1.1.2. Toxic Syndromes
    - 1.1.2.1. Sympathomimetics
    - 1.1.2.2. Cholinergic Drugs
    - 1.1.2.3. Anticholinergics
    - 1.1.2.4. Serotonergic Drugs
    - 1.1.2.5. Opioids
    - 1.1.2.6. Sedative-Hypnotic Drugs
    - 1.1.2.7. Hallucinatory Drugs
  - 1.1.3. Metabolic Acidosis in Toxicology
  - 1.1.4. Diagnosis of Suspected Poisoning and Diagnostic Hypotheses
  - 1.1.5. The Toxicological Information Service (TIS) of the National Institute of Toxicology as a Center for Diagnostic and Therapeutic Assistance
  - 1.1.6. Conclusions and Key Points
- 1.2. Initial Assessment of Patients Suffering from Intoxication
  - 1.2.1. Preliminary
    - 1.2.1.1. Introduction
    - 1.2.1.2. Index
    - 1.2.1.3. Objectives
  - 1.2.2. Hepatic Toxicology
  - 1.2.3. Renal Toxicology
  - 1.2.4. Hematological Toxicity
  - 1.2.5. Neurological and Psychiatric Toxicology
  - 1.2.6. Conclusions and Key Points
  - 1.2.7. Cardiovascular and Respiratory Toxicology





- 1.3. Toxic Organ Involvement
  - 1.3.1. Preliminary
    - 1.3.1.1. Introduction
    - 1.3.1.2. Index
    - 1.3.1.3. Objectives
  - 1.3.2. Reproductive and Perinatal Toxicology
  - 1.3.3. Neonatal and Pediatric Toxicology
  - 1.3.4. Geriatric Toxicology
- 1.4. Group Toxicology

## Module 2. Therapeutic Management of the Poisoned Patient: Life Support

- 2.1. A Complete Overview of Poisoning Treatment
- 2.2. Life Support for Poisoned Patients: Cardiopulmonary Arrest
  - 2.2.1. The Fundamental Pillars of Life Support in Cardiopulmonary Arrest
  - 2.2.2. Respiratory Arrest and Ventilatory Support
  - 2.2.3. Cardiorespiratory Arrest in Poisoned Patients
  - 2.2.4. Conclusions and Key Points
- 2.3. Acute Respiratory Failure in Poisoned Patients and Therapeutic Management
  - 2.3.1. Preliminary
  - 2.3.2. Acute Respiratory Failure due to Airway Obstruction
  - 2.3.3. Acute Respiratory Failure due to Hypoventilation
  - 2.3.4. Acute Respiratory Failure due to Decrease in Inspiratory Oxygen Fraction
  - 2.3.5. Acute Respiratory Failure due to Alveolocapillary Diffusion Impairment
  - 2.3.6. Acute Respiratory Failure due to Altered Oxygen Transport or Tissue Oxygen Utilization
  - 2.3.7. Acute Mixed Respiratory Failure
  - 2.3.8. Conclusions and Key Points
- 2.4. Hemodynamic Stability and Instability in Poisoned Patients
  - 2.4.1. Shock and its Different Types in Poisoned Patients
  - 2.4.2. Therapeutic Management of Shock in Poisoned Patients
  - 2.4.3. Hypotension and Hypertension in Poisoned Patients
  - 2.4.4. Cardiac Arrhythmias in Acute Poisoning
  - 2.4.5. Acute Coronary Syndrome in Poisoned Patients
  - 2.4.6. Conclusions and Key Points



- 2.5. Neuropsychiatric Disorders Associated with Poisoning
  - 2.5.1. Disorders of Consciousness Toxic Coma
  - 2.5.2. Seizures.
  - 2.5.3. Behavioral Disorder. Agitated Patient Management
    - 2.5.3.1. Etiology of Psychomotor Agitation. Toxicology-Related Causes
    - 2.5.3.2. Protective Measures for Healthcare Personnel
    - 2.5.3.3. Verbal, Mechanical and Pharmacological Restraint Measures
  - 2.5.4. Conclusions and Key Points

### Module 3. Therapeutic Management of the Poisoned Patient: Specific Treatment

- 3.1. The Three Phases of the Specific Treatment of Poisoning
- 3.2. Decrease Toxin Absorption
  - 3.2.1. Digestive Decontamination
    - 3.2.1.1. Emetics
    - 3.2.1.2. Gastric lavage
    - 3.2.1.3. Activated Carbon
    - 3.2.1.4. Cathartics
    - 3.2.1.5. Whole Bowel Irrigation
  - 3.2.2. Skin Decontamination
  - 3.2.3. Ocular Decontamination
  - 3.2.4. Prevention of Parenteral Absorption
  - 3.2.5. Prevention of Pulmonary Absorption
  - 3.2.6. Endoscopy and Surgery
  - 3.2.7. Dilution
  - 3.2.8. Conclusions and Key Points
- 3.3. Increasing Toxicant Elimination
  - 3.3.1. Kidney Cleanse
    - 3.3.1.1. Forced Diuresis
    - 3.3.1.2. Alkaline Diuresis
  - 3.3.2. Extrarenal Purification
    - 3.3.2.1. Dialysis
    - 3.3.2.2. Hemoperfusion, Hemofiltration, Hemodiafiltration
    - 3.3.2.3. Plasmapheresis and Exchange Transfusion
    - 3.3.2.4. Conclusions and Key Points

- 3.4. Antidotes
  - 3.4.1. Main Antidotes
    - 3.4.1.1. Indications, Contraindications, Side Effects and Precautions
    - 3.4.1.2. Dose
  - 3.4.2. Minimum Stock of Antidotes Depending on the Type of Hospital or Health Center
  - 3.4.3. Conclusions and Key Points
- 3.5. Antidotes
  - 3.5.1. Nasogastric or Orogastric Tube Placement Technique and Gastric Lavage
  - 3.5.2. Skin and Ocular Decontamination Techniques

### Module 4. Therapeutic Management of the Poisoned Patient: Additional Aspects

- 4.1. General Outline of Additional Aspects to Consider
- 4.2. The Suicidal Patient and Toxicology. Psychiatric Assessment
  - 4.2.1. Introduction
  - 4.2.2. Risk Factors for Self-Harming Behavior
  - 4.2.3. Determining the Severity of Self-Harm Attempts
  - 4.2.4. Suicidal Patient Management
  - 4.2.5. Conclusions and Key Points
- 4.3. Medical and Legal Aspects of Toxicological Care
  - 4.3.1. Introduction
  - 4.3.2. Report to the Court
  - 4.3.3. Medical and Legal Autopsy
  - 4.3.4. Sampling of the Patient Corpse
  - 4.3.5. Informed Consent and Voluntary Discharge of the Poisoned Patient
  - 4.3.6. The Extraction of Blood Samples for Toxicological Studies in the Emergency Room
  - 4.3.7. Conclusions and Key Points
- 4.4. Protective Measures for Healthcare Personnel
  - 4.4.1. Introduction
  - 4.4.2. Personal Protective Equipment (PPE)
  - 4.4.3. Poison Prevention Measures for Healthcare Personnel
  - 4.4.4. Conclusions and Key Points

- 4.5. General Criteria for Admission to an Intensive Care Unit
  - 4.5.1. Introduction
  - 4.5.2. Criteria Table
  - 4.5.3. Conclusions and Key Points
- 4.6. Toxicant-Induced Rhabdomyolysis
  - 4.6.1. Introduction
  - 4.6.2. Definition and Pathophysiology
  - 4.6.3. General Etiology and Toxicological Causes of Rhabdomyolysis
  - 4.6.4. Clinical Manifestations, Laboratory Tests and Complications
  - 4.6.5. Treatment
  - 4.6.6. Conclusions and Key Points
- 4.7. Toxicant-Induced Methemoglobinemia
  - 4.7.1. Introduction
  - 4.7.2. Pathophysiology
  - 4.7.3. Etiology of Methemoglobinemia
  - 4.7.4. Clinical Manifestations
  - 4.7.5. Suspected, Differential and Confirmatory Diagnosis
  - 4.7.6. Treatment
- 4.8. Hypersensitivity and Anaphylaxis Secondary to Poisonings by Animal Stings or Bites
  - 4.8.1. Introduction
  - 4.8.2. Etiology
  - 4.8.3. Hypersensitivity Types
  - 4.8.4. Clinical Manifestations
  - 4.8.5. Diagnosis
  - 4.8.6. Treatment Management
  - 4.8.7. Conclusions and Key Points
- 4.9. Emergencies Associated with Psychotropic Drugs
  - 4.9.1. Introduction
  - 4.9.2. Neuroleptic Malignant Syndrome.
    - 4.9.2.1. Definition and Risk Factors
    - 4.9.2.2. Clinical Manifestations and Differential Diagnosis
    - 4.9.2.3. Treatment
  - 4.9.3. Serotonin Syndrome
    - 4.9.3.1. Causes
    - 4.9.3.2. Clinical Manifestations and Differential Diagnosis
    - 4.9.3.3. Treatment
  - 4.9.4. Acute Dystonia
  - 4.9.5. Drug-Induced Parkinsonism
  - 4.9.6. Conclusions and Key Points



*A unique, complete and exclusive learning experience for your update in Urgent Therapeutic Management of the Poisoned Patient"*

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

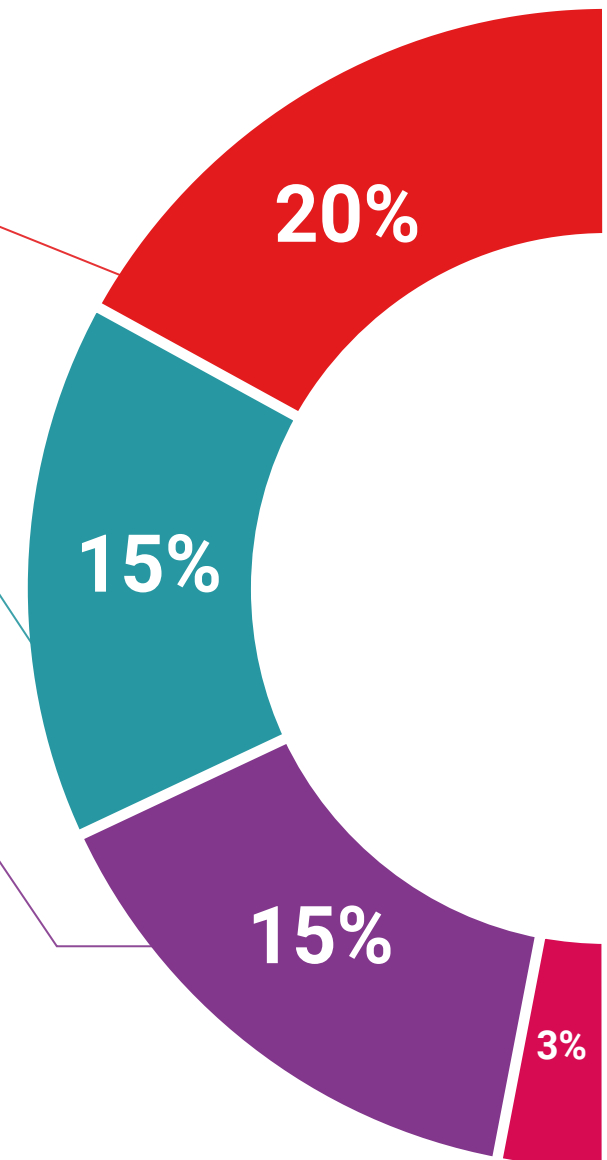
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Urgent Therapeutic Management of the Poisoned Patient 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 private qualification will allow you to obtain a **Postgraduate Diploma in Urgent Therapeutic Management of the Poisoned Patient** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** private qualification is a 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.

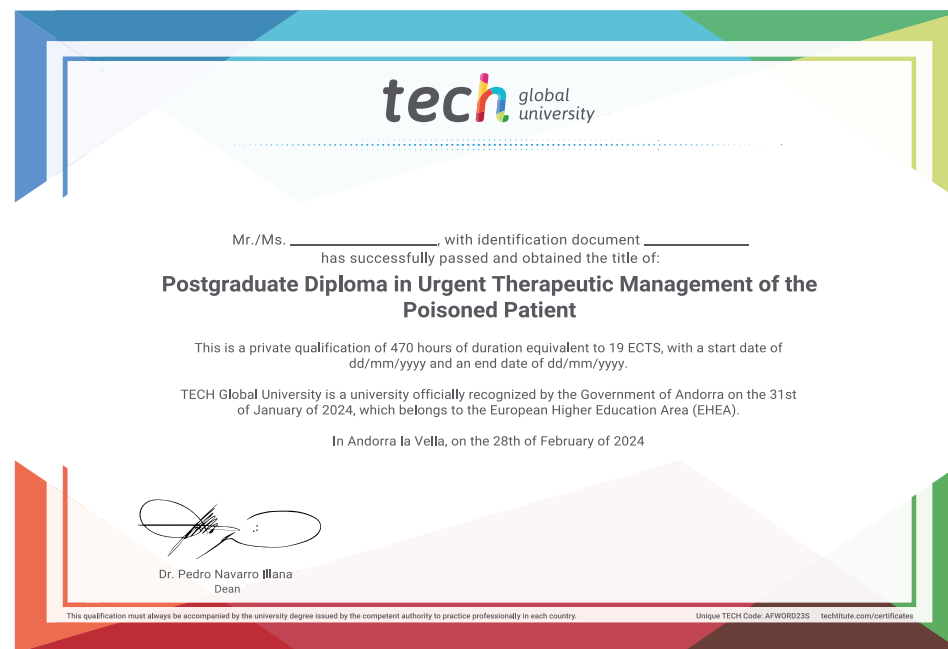
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Urgent Therapeutic Management of the Poisoned Patient**

Modality: **online**

Duration: **6 months**

Accreditation: **19 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.



**Postgraduate Diploma**  
Urgent Therapeutic Management  
of the Poisoned Patient

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 19 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma

## Urgent Therapeutic Management of the Poisoned Patient

