

# Postgraduate Diploma

## Toxicological Emergencies caused by Drugs of Abuse





## Postgraduate Diploma Toxicological Emergencies caused by Drugs of Abuse

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 17 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-toxicological-emergencies-caused-drugs-abuse](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-toxicological-emergencies-caused-drugs-abuse)

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# 01

# Introduction

Poisoning by drugs of abuse is a worldwide public health problem that has been increasing in recent years. Its consumption causes psychophysical problems that can lead to death or leave permanent consequences. At present there are new substances used in the population, in addition to those already known, which have been presenting cases of urgent consultations due to harmful effects on the health of the individual. Knowing which are the methods of Assessment of the Poisoned Patient in each case and providing adequate Life Support is part of what the graduate will be able to achieve in this academic program. A content of the highest quality, developed by experienced specialists, which will be provided 100% online through the most modern, safe and intuitive virtual platform.



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*Get up to date on the most current methods of Assessment of the Poisoned Patient, implemented in the emergency department"*

When the patient arrives at the emergency room due to poisoning, the health professional must follow an initial protocol that allows him to assess the need for Life Support and apply the ABCDE rule, as well as assess the level of consciousness using the Glasgow scale and place a venous line if possible.

Therefore, the specialist will act in a timely manner depending on the results of this assessment and the level of consciousness of the patient to determine a diagnosis of suspected poisoning and make the appropriate hypotheses of the case.

With this Postgraduate Diploma, the graduate will have the knowledge and skills needed to deal with Toxicological Emergencies caused by Drugs of Abuse. For this, TECH has prepared an academic itinerary composed of 3 study modules that bring together the topics in groups about the Assessment of the Poisoned Patient, Life Support and Toxicology for this type of substances.

In this syllabus, the student will find a series of relevant aspects, advances and innovations in the subject that will allow them to provide hemodynamic stability and instability in the poisoned patient. They will learn about poisoning by synthetic drugs, Toxicomania, abstinence syndromes. It will deal with sexual crimes, drug traffickers, reinsertion, among other related factors, reaching conclusions and key aspects to remember in each group of topics.

All this can be studied completely online, from a device of your choice with Internet connection. This will allow them to evolve in their academic journey progressively without complications, accessing the platform at any time of the day and enjoying a variety of multimedia resources: video summaries, complementary readings, quick action guides, images, etc., which will make the whole process much more dynamic.

This **Postgraduate Diploma in Toxicological Emergencies caused by Drugs of Abuse** 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 it is conceived scientific and practical information on those 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 assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*You will implement the most advanced decontamination procedures in acute poisonings"*

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*You will undertake exploration procedures of the patient poisoned by Drugs of Abuse, determining the type of toxicity present: hepatic, renal, cardiac or respiratory"*

*With the study of this Postgraduate Diploma you will get a complete vision of the treatment of poisoning.*

*Everything is an advantage when studying with TECH! This 100% online Postgraduate Diploma will provide you with the most updated content and the most comfortable and safe methodology.*

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading 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.

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

This Postgraduate Diploma in Toxicological Emergencies caused by Drugs of Abuse contains the ideal syllabus to get up to date with all the aspects related to the assessment and diagnosis of the poisoned patient who comes to the emergency room, conscious or unconscious. This is a high-level academic program that will show the ins and outs of diagnosis and support for the poisoned individual who comes to the emergency room with alterations in their systems and in many cases with danger of death. For this reason, with the guidance of specialized teachers, the student will assimilate the content much easier and will reach the goal in 6 months of academic course with new skills and abilities.





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*This program addresses the different signs and symptoms of the poisoned patient, such as acute respiratory failure and its therapeutic management"*



## 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





## 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. Toxicology of Drugs of Abuse

- ♦ Identify the toxicokinetics of selective  $\beta_2$ -adrenergic agonists, cardioactive steroids, antiarrhythmics, antithrombotics, anticoagulants, thrombolytics and antifibrinolytics and their treatment in case of acute poisoning
- ♦ Explain the toxicokinetics of antibiotics, antifungals and antivirals, antimalarials, antiparasitics and their correct clinical management



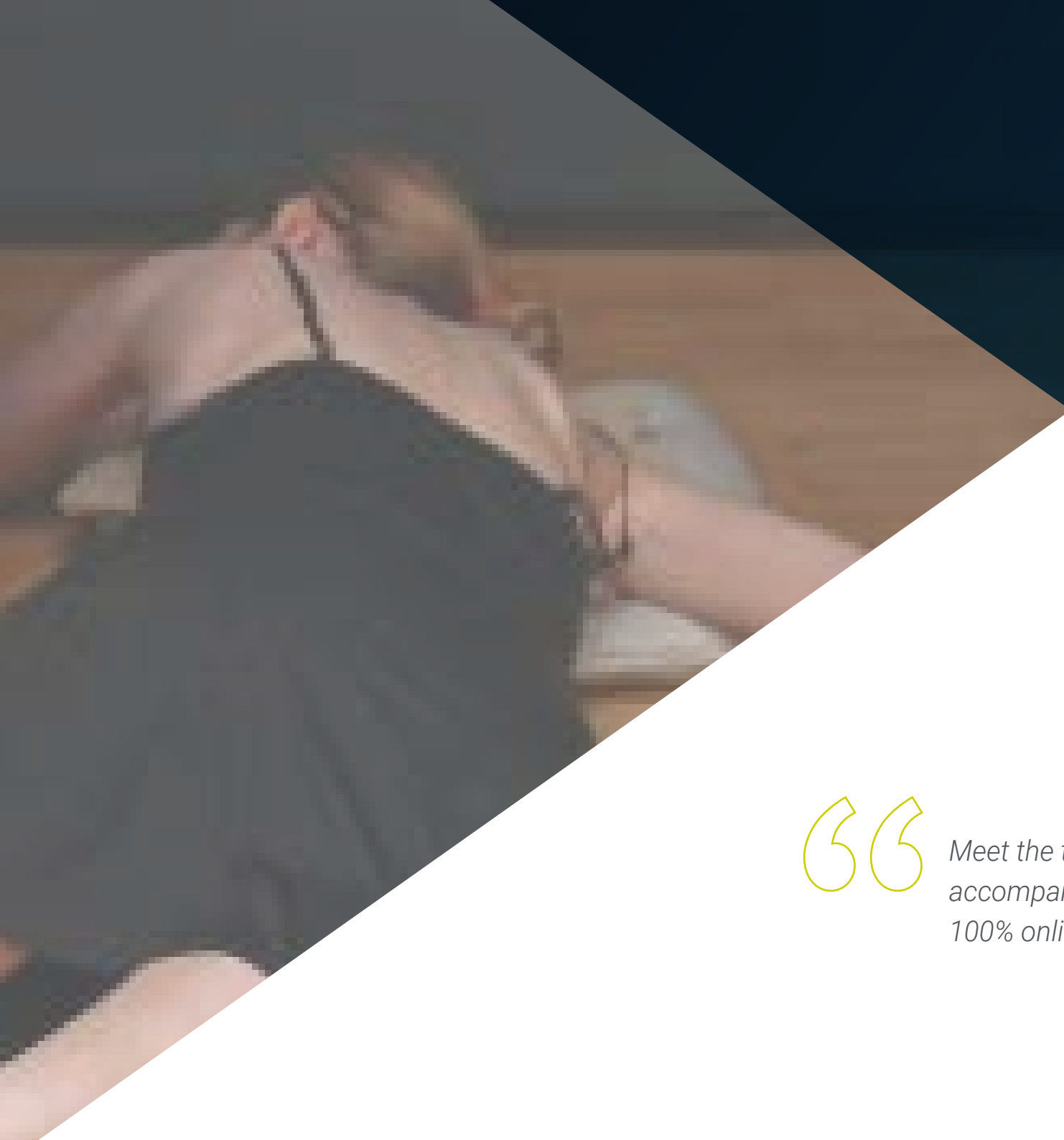
*When you enroll in this program you will have a team of professionals available to guide you through your academic journey. You will never be alone!"*

03

# Course Management

This program has the endorsement and quality of the most expert teachers in Emergency Toxicology. Thanks to their specialized trajectory, they have poured the greatest knowledge about Drugs of Abuse and their effects on the patient who uses them. They will show examples with real cases attended from the emergency department and therefore will bring an invaluable degree of actuality to the topics of study. In addition to their professional capacity, there is their human condition that will provide the graduate with fundamental values to practice in the area.





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*Meet the teachers who will  
accompany you on this interesting  
100% online academic journey"*

## 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

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*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, Spanish Association of Toxicology

### Dr. Bajo 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), Founder of the Spanish Foundation of Toxicology (FETOC)

### Mr. Carnero Fernandez, César Antonio

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

### Ms. 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 Urgencies, Emergencies and Catastrophes by CEU San Pablo University

**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)



**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

**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

It will be 6 months of study in which the graduate will have acquired new skills and abilities to care for the patient poisoned by the use of Drugs of Abuse, thanks to the theoretical and practical material available 24 hours a day, from the safest, most comfortable and dynamic virtual platform. This efficiency is due to the Relearning methodology implemented by TECH in each of its programs, which provides flexibility and speed for the assimilation of the contents. Undoubtedly, the best way to specialize in the hands of those who know.






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*It will be 6 months of 100% online study and from the hands of a team of experienced teachers who have prepared the most complete academic itinerary”*

## 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 Poisoning
  - 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

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- 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 Health care Personnel
    - 2.5.3.3. Verbal, Mechanical and Pharmacological Restraint Measures
  - 2.5.4. Conclusions and Key Points

### Module 3. Toxicology of Drugs of Abuse

- 3.1. Drug Addiction, Poisoning, Withdrawal Syndromes, Sexual Offenses, Drug Traffickers, Reintegration
- 3.2. Epidemiology of Drugs of Abuse
- 3.3. Poisoning by CNS Depressants:
  - 3.3.1. Preliminary
    - 3.3.1.1. Introduction
    - 3.3.1.2. Index
    - 3.3.1.3. Objectives
      - 3.3.1.3.1. Opiates (Heroin; Methadone; Oxycodone)
      - 3.3.1.3.2. Alcohol Poisoning
      - 3.3.1.3.3. Volatile Inhalable Substances
      - 3.3.1.3.4. Conclusions and Key Points
- 3.4. Psychostimulant Poisoning
  - 3.4.1. Preliminary
    - 3.4.1.1. Introduction
    - 3.4.1.2. Index
    - 3.4.1.3. Objectives
      - 3.4.1.3.1. Cocaine.
      - 3.4.1.3.2. Amphetamines
      - 3.4.1.3.3. Others: (Ephedrine and Pseudoephedrine, Khat, Energy Drinks, Guarana)
      - 3.4.1.3.4. Conclusions and Key Points

- 3.5. Hallucinogen Poisoning
  - 3.5.1. Hallucinogenic Mushrooms (LSD, Amanita Muscaria, Psilocybe)
  - 3.5.2. Hallucinogenic Plants
    - 3.5.2.1. Cannabis
    - 3.5.2.2. Mescaline
    - 3.5.2.3. Estramonium
    - 3.5.2.4. Belladonna
    - 3.5.2.5. Scopolamine (Burundanga)
    - 3.5.2.6. Vegetable Ecstasy
  - 3.5.3. DMT and AMT
  - 3.5.4. Dextromethorphan
  - 3.5.5. Conclusions and Key Points
- 3.6. Poisoning by Synthetic Drugs
  - 3.6.1. Synthetic Opiates (Fentanyl and Meperidine Derivatives)
  - 3.6.2. Dissociative
    - 3.6.2.1. Phencyclidine and Ketamine
  - 3.6.3. Methaqualone Derivatives
  - 3.6.4. Synthetic Phenylethylamines
    - 3.6.4.1. DOM, BOB, 2C-B, MDA
    - 3.6.4.2. Ecstasy (MDMA)
    - 3.6.4.3. Liquid Ecstasy (GHB)
    - 3.6.4.4. Conclusions and Key Points
- 3.7. Psychosocial Component of Drugs of Abuse
- 3.8. Sex and Drugs: Chemsex (Chemical Sex)
  - 3.8.1. What is Meant by Chemsex?
  - 3.8.2. Historical Background and Epidemiologic Profile of Consumers
  - 3.8.3. Risks Associated with the Practice of Chemsex
  - 3.8.4. Most Commonly Used Drugs
  - 3.8.5. Conclusions and Key Points
- 3.9. Language and Drugs
  - 3.9.1. A Language that Emergency Physicians Must Know
  - 3.9.2. Drug Slang
  - 3.9.3. The Slang of Drugs of Abuse
  - 3.9.4. Conclusions and Key Points



- 3.10. A Society Besieged by Drugs
  - 3.10.1. Introduction
  - 3.10.2. The "Botellón" a Toxic Social Phenomenon
  - 3.10.3. Electronic Parties and Drugs of Abuse
  - 3.10.4. The "Jarra Loca"
  - 3.10.5. Conclusions and Key Points
- 3.11. Bodypackers and Bodystuffers in the Emergency Department
  - 3.11.1. Definition
  - 3.11.2. Clinical Manifestations
  - 3.11.3. Diagnosis
  - 3.11.4. Treatment Management
  - 3.11.5. Conclusions and Key Points
- 3.12. Chemical Submission
  - 3.12.1. Concept
  - 3.12.2. Epidemiology
  - 3.12.3. Keys to Diagnosis
  - 3.12.4. Crimes Related to Chemical Submission
  - 3.12.5. Drugs Most Commonly Used in Chemical Submission
  - 3.12.6. Conclusions and Key Points
- 3.13. Withdrawal Syndromes
  - 3.13.1. Introduction and Objectives
  - 3.13.2. Alcohol Withdrawal Syndrome
    - 3.13.2.1. Concept
    - 3.13.2.2. Clinical Manifestations and Criteria Diagnosis
    - 3.13.2.3. Delirium Tremens
    - 3.13.2.4. Alcohol Withdrawal Syndrome Treatment
    - 3.13.2.5. Conclusions and Key Points
  - 3.13.3. Opioid Withdrawal Syndrome
    - 3.13.3.1. Concept
    - 3.13.3.2. Opioid Dependence and Tolerance
    - 3.13.3.3. Clinical Manifestations and Diagnosis of the Withdrawal Syndrome
    - 3.13.3.4. Treatment of Drug Addicts with Withdrawal Syndrome
  - 3.13.4. Detoxification Treatment
  - 3.13.5. Conclusions and Key Points
- 3.14. Addictive Behavior Unit



*With TECH you have the freedom to choose the best time to study this program. Its 100% online modality gives you the comfort and ease you need"*

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. 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 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 Diploma in Toxicological Emergencies caused by Drugs of Abuse guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



“

*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 Toxicological Emergencies caused by Drugs of Abuse** 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.

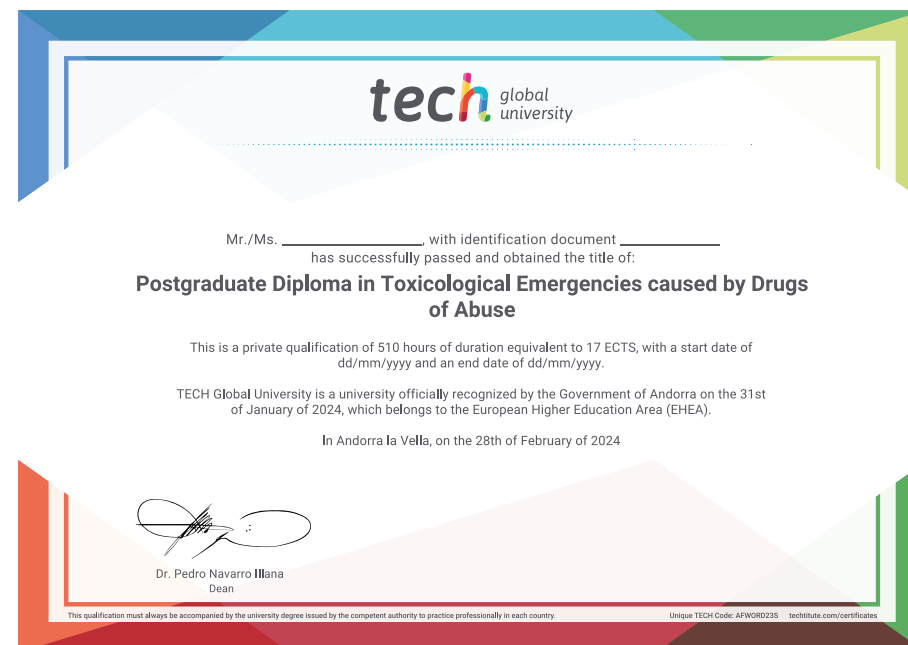
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Toxicological Emergencies caused by Drugs of Abuse**

Modality: **online**

Duration: **6 months**

Accreditation: **17 ECTS**



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

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development languages

virtual classroom

**tech** global  
university

**Postgraduate Diploma**  
Toxicological Emergencies  
caused by Drugs of Abuse

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 17 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma

## Toxicological Emergencies caused by Drugs of Abuse

