

Postgraduate Certificate Solvent-Related Toxicological Emergencies



Postgraduate Certificate Solvent-Related Toxicological Emergencies

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 4 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/medicine/postgraduate-certificate/solvent-related-toxicological-emergencies

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01

Introduction

Ingesting or inhaling hydrocarbons can cause irritation of the lungs, with coughing, asphyxia, choking and neurological problems, similarly sniffing vapors can cause alterations in the cardiac system and even sudden death. It is common for Emergency or Primary Care specialists to face this type of cases, so it is essential to be up to date with scientific advances in terms of treatment and available antidotes. This program contains exclusive content developed by TECH's team of professionals, for their learning and updating on the latest updates regarding Solvent-Related Toxicological Emergencies. For 6 weeks, they will delve into the latest evidence in the area. 100% online and from the hand of expert teachers and with the most effective teaching methodology: Relearning, which will facilitate the entire learning process from the comfort of their device or favorite place.





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Get up to date with the protocols to follow in cases of Solvent-Related Toxicological Emergencies, with this 100% online Postgraduate Certificate"

There is no specific pattern of patients in the area of Toxicological Emergencies Related to Solvents. From children as young as 5 years old to adolescents or adults who come into contact directly or indirectly with substances of this type come to the specialist's office. The diagnosis is established on the basis of the description of the facts, the characteristic odor of the substance on the person's breath or clothing and other specific methods or techniques.

As for the treatment, it is varied. It may consist of removing contaminated clothing, washing the skin or administering oxygen, and of course the administration of the appropriate drug. This Postgraduate Certificate includes the most exemplary cases for the easy understanding of the student in terms of the technique to implement or the possible signs and symptoms of the patient with poisoning by aliphatic and linear alcohols, hydrocarbons, glycols and nitrogen derivatives, substances related to industrial processes or designer drugs that in many cases generate irreversible consequences in the patient. Therefore, at the end of this academic course, the specialist will be ready to attend with the most updated optics the Solvent-Related Toxicological Emergencies.

The convenient study methodology implemented by TECH will allow them to accomplish the goal from the comfort of their home because it is 100% online and without rigid schedules, since the virtual platform is open 24 hours a day to consult or download the study material. Undoubtedly, an opportunity that everyone wants to have to catch up.

This **Postgraduate Certificate in Solvent-Related Toxicological Emergencies** 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



You will be an expert in detecting the clinical manifestations, as well as the treatment in cases of industrial poisoning by solvents"

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Interpret the toxicokinetics of asphyxiants and pulmonary irritants, antiseptics, disinfectants and sterilants, as well as the most effective protocols of action against them”

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.

The most specialized content available in different formats so that you can quickly and easily understand each of the concepts.

Enjoy the new way to update your knowledge with the help of the experts in Toxicology who lead this 100% online program.



02

Objectives

This Postgraduate Certificate in Solvent-Related Toxicological Emergencies contains an ideal structure for the student to meet their academic goal in only 120 hours of 100% online classes. Due to its high academic level design, the graduate will quickly acquire new skills and abilities for the management of patients poisoned with solvents. At the end of this program, the graduate will be able to undertake the most advanced diagnostics and therapeutics according to each case presented in consultation.





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You will be able to recognize the toxicokinetics of petroleum derivatives, fluorine, hydrofluoric acid, methanol, ethylene glycol and other toxic alcohols and their treatment in case of acute poisoning"



General Objectives

- 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

- ◆ Recognize the toxicokinetics of petroleum derivatives, fluorine, hydrofluoric acid, methanol, ethylene glycol and other toxic alcohols and their treatment in case of acute intoxication
- ◆ Interpret the toxicokinetics of asphyxiants and pulmonary irritants, antiseptics, disinfectants and sterilizers, as well as the most effective protocols for their treatment

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The guidance of the most knowledgeable teachers will provide you with security and quality throughout your academic journey”

04

Course Management

This academic program has the most specialized teaching staff in the current educational market. They are specialists in the area of Toxicology, both in Health Sciences and other specific areas, selected by TECH to develop the entire itinerary. Therefore, based on their own experience and the latest scientific evidence, they have designed the most updated content that provides a guarantee of quality in such a relevant subject.





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You will have the most experienced specialists in the area of Toxicology as teachers of this program"

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

- ♦ 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
- ♦ University Expert 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
- ♦ University Expert in Toxicology by the University of Sevilla
- ♦ 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



05

Structure and Content

This Postgraduate Certificate is an intensive program that will prepare the professional to face all the challenges in this area, in any hospital or health care center in the world. Its globalized approach presents the topics in such a way as to advance in the process of understanding of all the concepts in an agile and uncomplicated way. Relearning, methodology applied in the design of the content, gives you the autonomy you need to achieve the degree in just weeks, from your favorite place and device, because it is completely online.





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The syllabus of this program has been developed by leading experts in Toxicology so that the graduate will have the highest quality learning”

Module 1. Industrial Poisoning by Solvents

- 1.1. Introduction to the Module
- 1.2. Hydrocarbon Poisoning
 - 1.2.1. Preliminary
 - 1.2.1.1. Introduction
 - 1.2.1.2. Index
 - 1.2.1.3. Objective
 - 1.2.2. Aliphatic or Linear
 - 1.2.2.1. Short Chain Hydrocarbons: Butane, Propane, Ethane and Methane
 - 1.2.2.2. Long-Chain Hydrocarbons: Pentanes, Hexanes, Heptanes and Octanes
 - 1.2.2.3. Petroleum Distillates: Gasoline, Kerosene, and Others
 - 1.2.2.4. Halogenated Products
 - 1.2.2.5. Carbon Tetrachloride
 - 1.2.2.6. Chloroform
 - 1.2.2.7. Dichloromethane
 - 1.2.2.8. Trichloroethylene
 - 1.2.2.9. Tetrachloroethylene
 - 1.2.2.10. Trichloroethane
 - 1.2.3. Aromatic or Cyclic
 - 1.2.3.1. Benzene
 - 1.2.3.2. Toluene
 - 1.2.3.3. Conclusions and Key Points
- 1.3. Aliphatic Alcohols Poisoning
 - 1.3.1. Preliminary
 - 1.3.1.1. Introduction
 - 1.3.1.2. Index
 - 1.3.1.3. Objective
 - 1.3.2. Methyl Alcohol
 - 1.3.3. Isopropyl Alcohol
 - 1.3.4. Conclusions and Key Points





- 1.4. Glycol Poisoning
 - 1.4.1. Preliminary
 - 1.4.1.1. Introduction
 - 1.4.1.2. Index
 - 1.4.1.3. Objective
 - 1.4.2. Ethylene Glycol
 - 1.4.3. Diethylene Glycol
 - 1.4.4. Propylene Glycol
 - 1.4.5. Conclusions and Key Points
- 1.5. Nitrogen Derivative Poisoning
 - 1.5.1. Preliminary
 - 1.5.1.1. Introduction
 - 1.5.1.2. Index
 - 1.5.1.3. Objective
 - 1.5.2. Aniline
 - 1.5.3. Tolidine
 - 1.5.4. Nitrobenzene
 - 1.5.5. Conclusions and Key Points
- 1.6. Acetone Poisoning
 - 1.6.1. Preliminary
 - 1.6.1.1. Introduction
 - 1.6.1.2. Index
 - 1.6.1.3. Objective
 - 1.6.2. Conclusions and Key Points

06

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 assess 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

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

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 prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational 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.

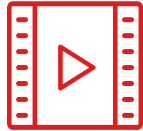
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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 adapted in 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

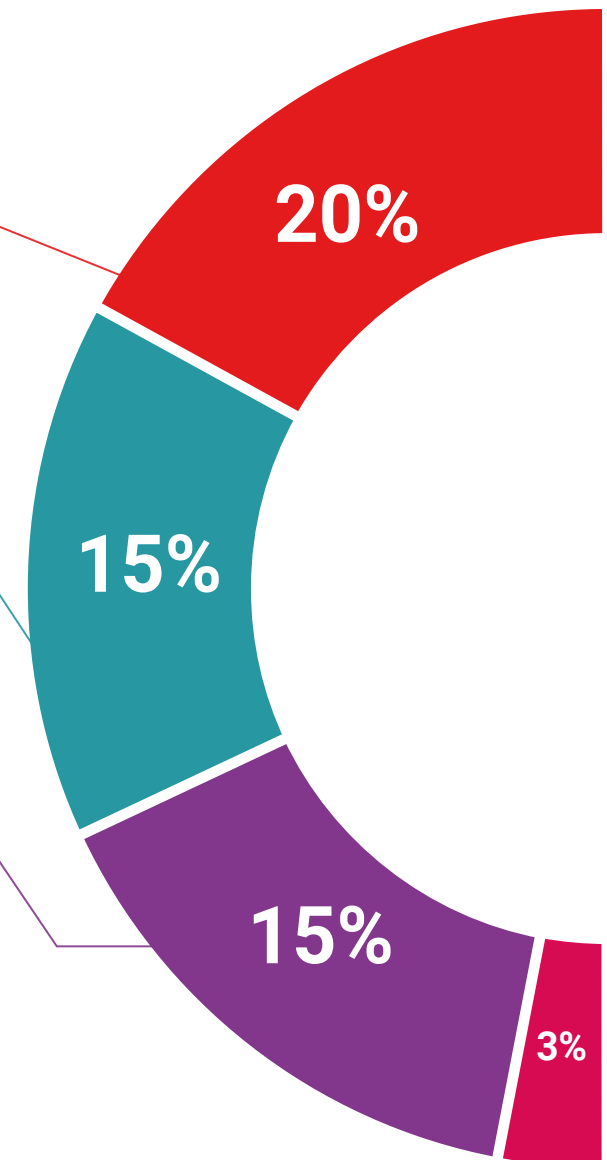
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

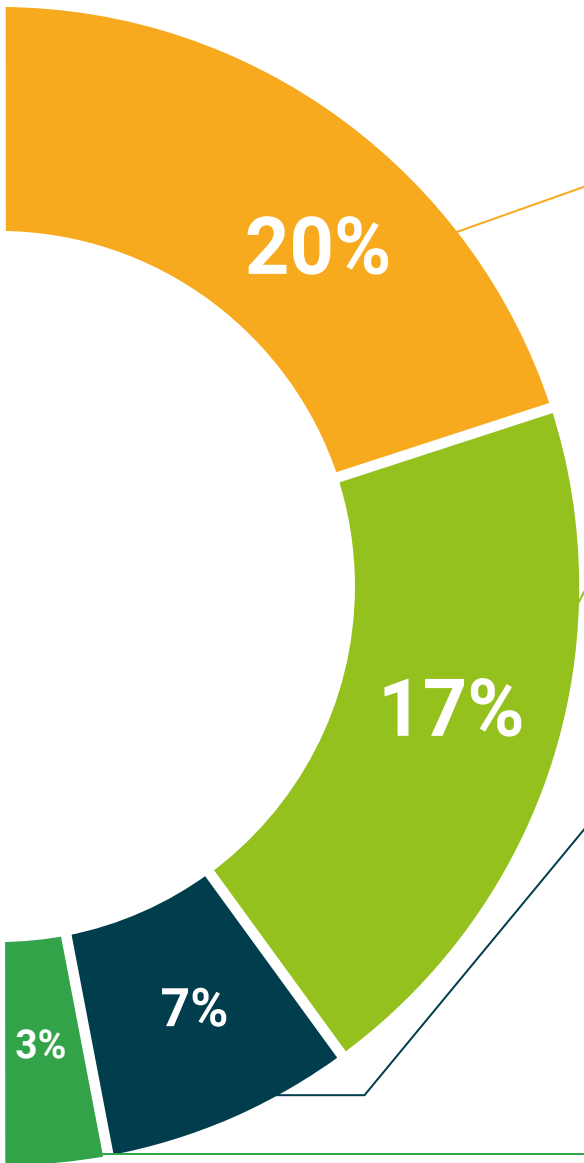
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 assess and re-assess 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 Solvent-Related Toxicological Emergencies 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 program will allow you to obtain your **Postgraduate Certificate in Solvent-Related Toxicological Emergencies** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

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

Title: **Postgraduate Certificate in Solvent-Related Toxicological Emergencies**

Modality: **online**

Duration: **6 weeks**

Accreditation: **4 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
development languages
virtual classroom



Postgraduate Certificate
Solvent-Related
Toxicological Emergencies

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 4 ECTS
- » Schedule: at your own pace
- » Exams: online

Postgraduate Certificate Solvent-Related Toxicological Emergencies

