Postgraduate Certificate

Environmental Epidemiology and Public Health

tech technological university

tech universidad tecnológica

Postgraduate Certificate

Environmental Epidemiology and Public Health

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/engineering/postgraduate-certificate/environmental-epidemiology-public-health**

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01

Introduction

After the pandemic caused by COVID-19, greater relevance has been given to the analysis of wastewater as an effective method for disease control. Although it is not the first time in history that it has been used, it is true that society has seen the results and various organizations have even promoted the use of this technique for the detection of other pathologies. Given the importance of environmental epidemiology in recent times, this institution has created this program, where in just 6 weeks, the graduates will obtain the most advanced information on toxicology, the effects of pollution on health or environmental problems in the future. All of this through innovative multimedia resources that can be easily accessed at any time of the day, from an electronic device with an Internet connection.

This Postgraduate Certificate offers you a theoretical and practical vision of environmental epidemiology and public health. Enroll now and advance in your professional career"

The relationship between environmental pollution and human health has been the focus of countless research studies in recent decades. Many of them confirm the direct connection between air or water quality and the appearance of certain diseases. However, until the global pandemic caused by COVID-19, the vast majority of the population was unaware of this reality, which has serious consequences for their health.

In this scenario, environmental epidemiology has become particularly relevant. The studies carried out from this discipline, as well as the techniques and methods used for the detection, prevention and control of diseases have been put in value in the face of possible health problems in the future. For this reason, TECH offers this Postgraduate Certificate, which allows the graduates in Engineering to advance in a booming field that demands highly qualified professionals.

A program where students can delve into the factors and mechanisms that influence toxicity, public health problems arising from pollution, the effects on humans, as well as risk assessment. All this through multimedia resources (video summaries, detailed videos) and case studies prepared by specialists in this field.

In addition, thanks to the Relearning system, based on the reiteration of content, students will be able to advance much more quickly through the content of this program taught exclusively online.

The engineers have before them an excellent opportunity to progress in their professional career thanks to a university education, which they can study comfortably whenever and wherever they want. You only need a computer, tablet or cell phone with Internet connection to view, at any time, the syllabus hosted on the virtual platform. Students are, therefore, faced with a program designed for people who want a quality program, compatible with their work and/or personal responsibilities.

This **Postgraduate Certificate in Environmental Epidemiology and Public Health** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts of Environmental Engineering
- 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 self-assessment can be used 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

This Postgraduate Certificate will take you to deepen comfortably from your computer in the route of entry of pollutants into ecosystems. Enroll now"

No attendance, no classes with fixed schedules. TECH has thought of you, so that you can pursue a university program without neglecting other areas of your life"

Thanks to this Postgraduate Certificate, you will be able to apply the knowledge acquired to the remediation of contaminated areas.

This university program will lead you to know the parameters currently used to evaluate toxicity and its implications on human health.

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

Its multimedia content, developed with the latest educational technology, will provide the professionals with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

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

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Objectives

TECH has designed this Postgraduate Certificate in Environmental Epidemiology and Public Health in order to contribute to the professional progress of the graduates who take this degree. Thus, at the end of the 150 teaching hours, the students will have obtained the most advanced learning in this field, being able to identify the methods and techniques used for the detection of toxins, their behavior, as well as the effects they produce on people's health.

Obtain advanced learning in Environmental Epidemiology and Public Health with this 100% online university program"

General Objectives

- Acquire essential knowledge of environmental epidemiology
- Understand the significance of pollutants on human health in the present and future
- Identify pollutant distribution patterns
- Understand the mode of action of toxicants

You will have access to multimedia teaching tools 24 hours a day. Enroll now”

Specific Objectives

- Understand the processes toxins undergo upon entering a living organism and the response mechanisms that are activated to counteract their impact
- Know the different methods used to asses toxicity and the requirements that validate them
- Understand the mechanisms of toxicity at a cellular level
- Learn the toxic effects on different organs and systems of living beings

03

Structure and Content

The effectiveness of the *Relearning* method has led TECH to use it in all its qualifications. Thus, the students of this Postgraduate Certificate will see how they will be able to advance in a much more dynamic and fluid way through the syllabus. In addition, this system allows them to reduce the long hours of study that are so frequent in other courses. In this way, the graduates will deepen in the key concepts of environmental epidemiology, the current problems of the existing pollutants in the environment or the remediation strategies used.

The case studies provided by the specialized teaching team will bring you closer to situations and methods, which you will be able to apply in your daily professional performance"

Module 1. Environmental Epidemiology and Public Health

1.1. General Concepts and Epidemiokinetics
- 1.1.1. Introduction to Epidemiology and Toxicology
- 1.1.2. Toxin Action Mechanisms
- 1.1.3. Toxin Entrance Routes

1.2. Toxicity Assessment
- 1.2.1. Types of Tests and Parameters for Toxicity Assessment
- 1.2.2. Toxicity Assessment in Medicines
- 1.2.3. Hormetins

1.3. Factors that Affect Toxicity
- 1.3.1. Physical Parameters
- 1.3.2. Chemical Parameters
- 1.3.3. Biological Parameters

1.4. Toxicity Mechanisms
- 1.4.1. Mechanisms at the Cellular and Molecular Levels
- 1.4.2. Damage at the Cellular Level
- 1.4.3. Survivability

1.5. Toxicity without Organotropism
- 1.5.1. Simultaneous Toxicity
- 1.5.2. Genotoxicity
- 1.5.3. Impact of Toxicity on Organisms and Ecosystems

1.6. Pollution and Public Health
- 1.6.1. Pollution Problems
- 1.6.2. Public Health Issues Related to Pollution
- 1.6.3. Health Effects of Pollution on Human Health

1.7. Main Types of Contaminants
- 1.7.1. Sources of Physical Pollution
- 1.7.2. Sources of Chemical Pollution
- 1.7.3. Biological Pollution Sources

1.8. Pollutant Entry Routes into Ecosystems
- 1.8.1. Pollution Entry Processes into the Environment
- 1.8.2. Sources of Pollution
- 1.8.3. The Significance of Pollution in the Environment

1.9. Pollutant Movement in Ecosystems
- 1.9.1. Pollutant Distribution Processes and Patterns
- 1.9.2. Local Pollution
- 1.9.3. Transboundary Pollution

1.10. Risk Assessment and Environmental Remediation Strategies
- 1.10.1. Remediation
- 1.10.2. Remediation of Polluted Areas
- 1.10.3. Future Environmental Problems

A university education that will lead you to a deeper understanding of the problem of transboundary pollution"

04

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.

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"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

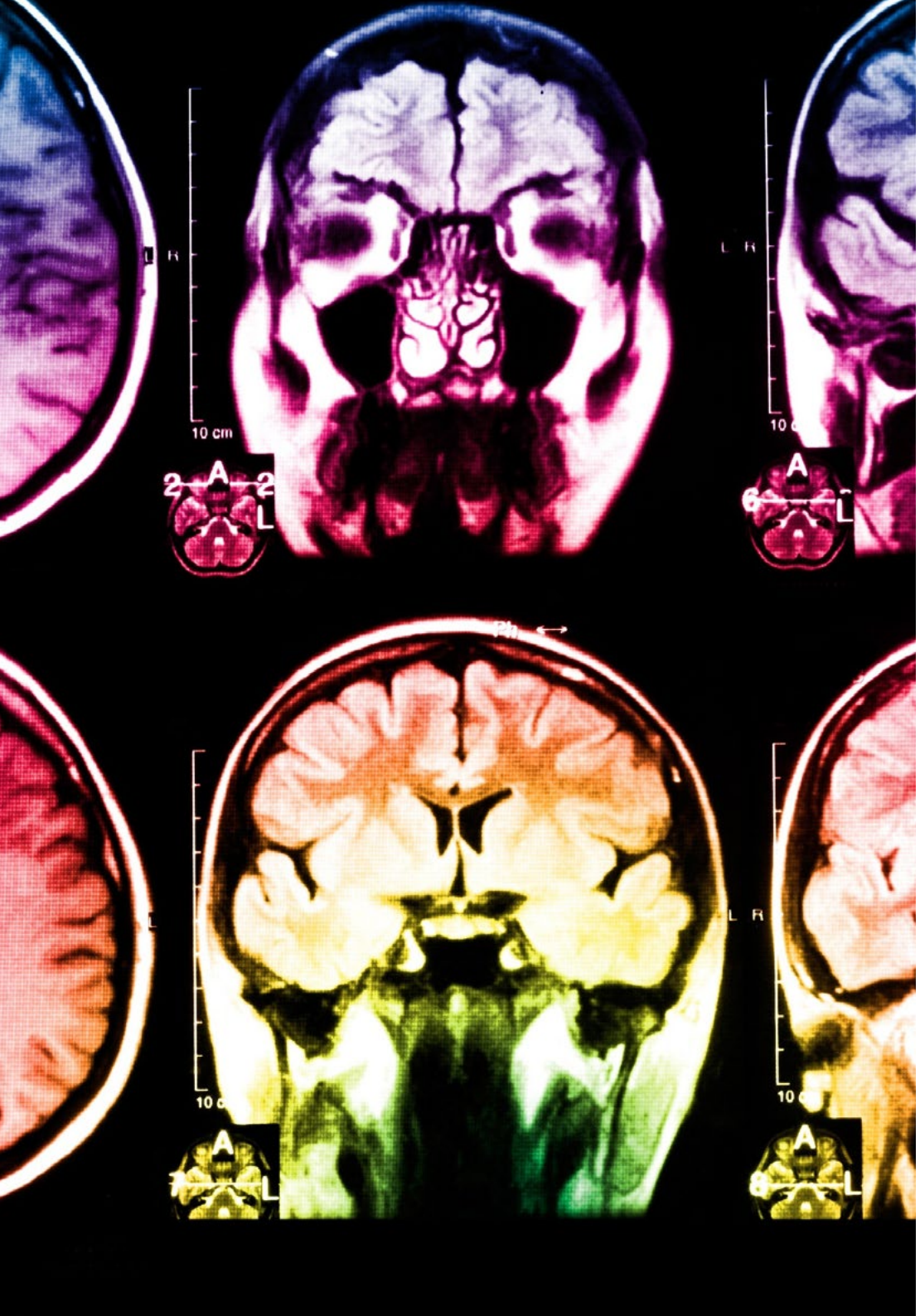
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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

In 2019, we obtained the best learning results of all online universities in the world.

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



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. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

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.

Classes

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

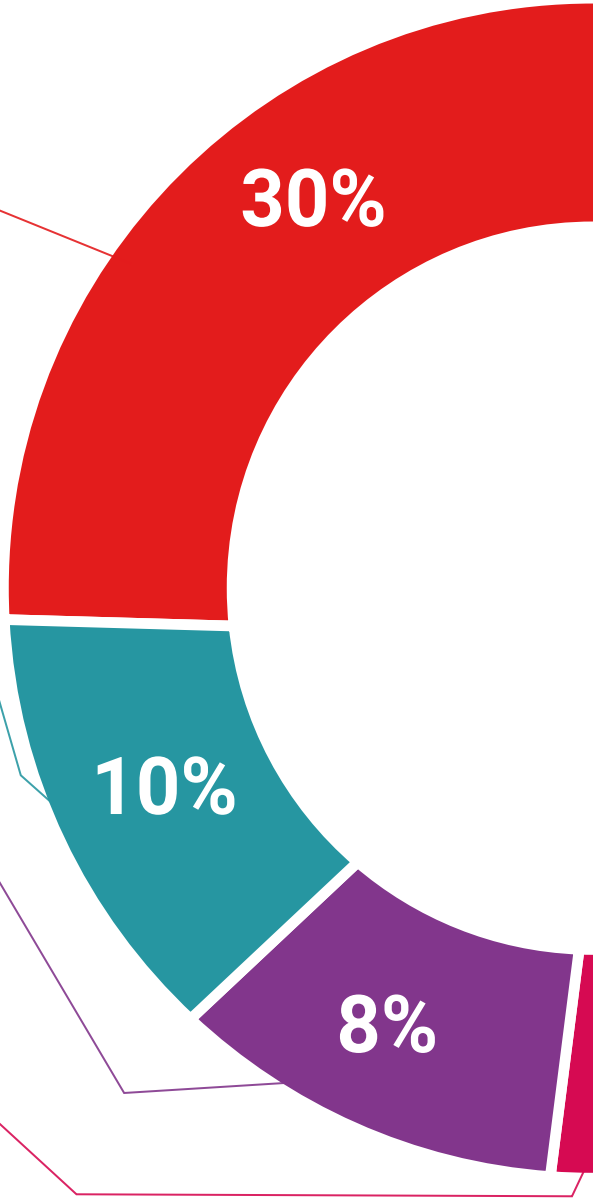
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

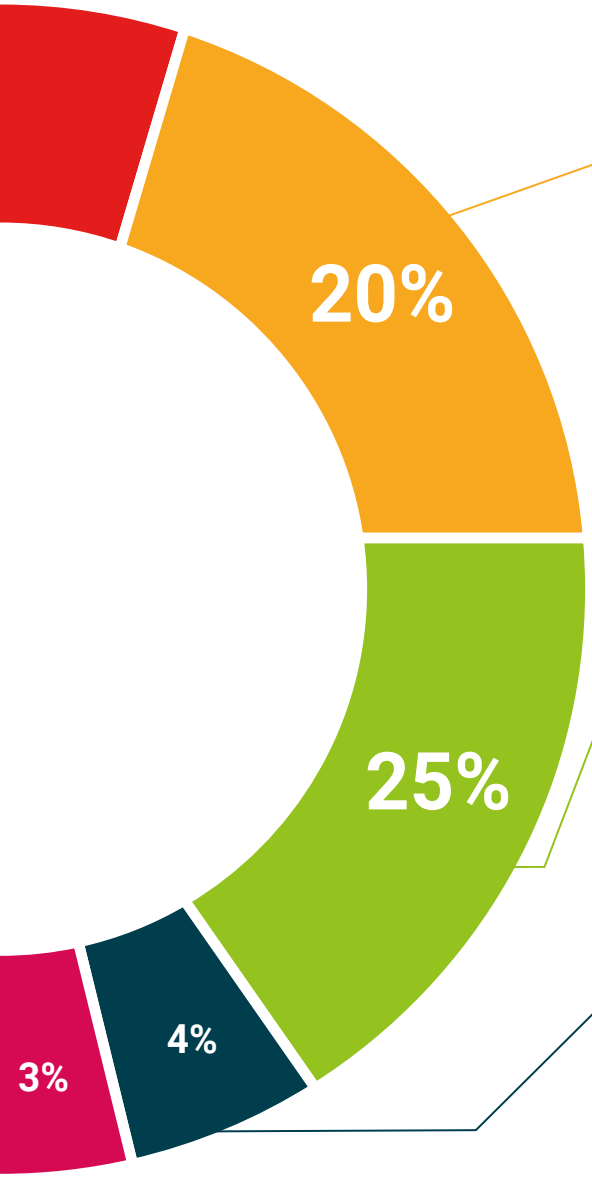
Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

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.





Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

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".

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.

05

Certificate

The Postgraduate Certificate in Environmental Epidemiology and Public Health guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Postgraduate Certificate in Environmental Epidemiology and Public Health** contains the most complete and up-to-date program on the market.

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

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

Title: **Postgraduate Certificate in Environmental Epidemiology and Public Health**

Official Nº of hours: **150 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Environmental Epidemiology and Public Health

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

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

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