

# Postgraduate Certificate Disciplinary Training in Technology and Computer Science





## Postgraduate Certificate Disciplinary Training in Technology and Computer Science

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

Website: [www.techtitute.com/us/education/postgraduate-certificate/disciplinary-training-technology-computer-science](http://www.techtitute.com/us/education/postgraduate-certificate/disciplinary-training-technology-computer-science)

# Index

01

Introduction

---

p. 4

02

Objectives

---

p. 8

03

Course Management

---

p. 12

04

Structure and Content

---

p. 16

05

Methodology

---

p. 20

06

Certificate

---

p. 28

# 01

# Introduction

In recent decades, there has been an important technological advance that has been reflected in everyday life and, of course, in education. That is why it is essential that professionals who teach, especially, the disciplines of Technology and Computer Science are aware of the latest developments in this field, as well as the use of digital resources according to the educational level. In response to this need, this program was created to provide teaching professionals with the latest information on information management, e-Learning platforms and educational tools. All this, in an advanced 100% online content, created by a specialized team of teachers with experience in teaching at different educational stages.



“

*Enroll now in a 100% online Postgraduate Certificate that will provide you with the update you need in Technology and Computer Science applied to High School"*

In a globalized world, digital technology is the king. Its mark is present in the most recent advances in the fields of astronomy, medicine and the automotive industry. This is also reflected in the classroom, where the use of numerous technological teaching resources and access to online platforms for the acquisition of knowledge is now commonplace.

In this way, the subjects of Technology and Computer Science have become vitally important for students, especially in the High School stage, where their academic and professional itinerary is fundamentally defined. That is why TECH has created this university proposal that provides teachers with the latest information on tools to generate and distribute knowledge through ICT.

This is an online educational program that provides an advanced and up-to-date syllabus on information and communication management, delves into social networks, the criteria for choosing digital educational tools and the use of free software in education. All of this is complemented by additional multimedia resources that offer a much more dynamic and attractive learning experience.

In addition, thanks to the Relearning method, used by this institution in all its programs, the graduate will acquire new knowledge in a much simpler way and without the need to invest long hours of study and memorization.

The teaching professional is, in this way, in front of a unique opportunity to update his knowledge through a Postgraduate Certificate that he will be able to complete comfortably. All you need is an electronic device with an Internet connection to view the content hosted on the virtual platform. With no classroom attendance or fixed class schedules, this program is an ideal option for those who wish to combine a first-class program with the most demanding responsibilities.

This **Postgraduate Certificate in Disciplinary Training in Technology and Computer Science** contains the most complete and up-to-date educational program on the market. The most important features include:

- ♦ The development of case studies presented by experts in teaching in High School Education
- ♦ 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 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



*Show your students the technological and computer resources available to generate and find useful knowledge"*

“

*Stand out as a teacher and apply the latest news on digital educational tools in your Technology and Computer Science sessions”*

*Get closer to b-Learning through this program and learn about its use in High School and Vocational Education.*

*This program takes you on a journey through the evolution of educational technology over the years and its different phases.*

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

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the educational year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02

# Objectives

The objective of this Postgraduate Certificate is to provide teachers who teach Technology and Computer Science with the latest advances in the use of digital tools and resources to transmit knowledge. A goal that will be easier to achieve thanks to the case studies provided by the teachers of this program, which is the result of their experience in the teaching sector.







“

*Apply from now on the instructional design proposal with ICT provided by this educational program”*



## General Objectives

---

- Introduce students to the world of teaching, from a broad perspective that provides them with the necessary skills for the performance of their work
- Know the new tools and technologies applied to teaching
- Show the different options and ways the teacher can work in their post
- Promote the acquisition of communication and knowledge transmission skills and abilities
- Encourage continuing education for students

“

*Enhance the emotional intelligence of your students inside and outside the technological classroom thanks to the learning you will acquire in this Postgraduate Certificate"*





## Specific Objectives

---

- ♦ Expose the concepts of Technology and Computer Science and inquire about them
- ♦ Know the importance of Technology in society, its advantages and disadvantages, and its main characteristics
- ♦ Learn the concept of technological renovation, making a historical journey to differentiate the different stages of the evolution of Technology and Computer Science
- ♦ Understand the social relevance of knowing the technological and informatics development, especially in the educational field
- ♦ Understand the concept of educational technology by different authors and their most relevant contributions
- ♦ Know how educational technology has evolved over the years and its different phases

03

# Course Management

In its mission to provide students with high quality education, TECH carries out a rigorous selection process for all teachers. For this reason, students who access this program will have at their disposal a faculty with extensive knowledge of teaching at various educational stages. An extensive experience that is evident in the syllabus developed and to which the student will have access 24 hours a day, 7 days a week.



“

*The teachers will provide you with an update on technological and computer advances and their teaching to adolescent students"*

## Management



### Dr. Barboyón Combey, Laura

- ♦ Teacher of Primary Education and Postgraduate Studies
- ♦ Teacher of Primary Education and Postgraduate Studies
- ♦ Teacher in Postgraduate University Studies of High School Teacher Formation
- ♦ Teacher of Primary Education in several schools
- ♦ Doctor in Education from the University of Valencia
- ♦ Master's Degree in Psychopedagogy from the University of Valencia
- ♦ Degree in Primary School Education with a major in English Teaching from the Catholic University of Valencia San Vicente Mártir



# 04

# Structure and Content

Multimedia pills, specialized readings and case studies make up the innovative didactic material that will be available to students taking this Postgraduate Certificate. Resources that complement the fantastic syllabus that will bring you up-to-date on the latest developments in the design of educational tools, creativity management or mobile pedagogy. All this, in addition, oriented to the teaching of lessons in the subjects of Technology and Computer Science in High School and that will allow you to stand out as a teacher.







“

*A syllabus that will provide you with an advanced syllabus with an up-to-date and practical approach to the subjects of Technology and Computer Science"*

**Module 1. Complements for the Disciplinary Training of Technology and Computer Science**

- 1.1. Technology in Society Evolution of Technological Education
  - 1.1.1. Previous Concepts
  - 1.1.2. Importance of Technology in Society
  - 1.1.3. Technological Renovation
  - 1.1.4. Importance of Teaching Technological and Information Technology Development in Society
  - 1.1.5. Historical Evolution of Educational Technology
  - 1.1.6. Conceptualization of Educational Technology
- 1.2. Vocational Training
  - 1.2.1. Vocational Training Areas
  - 1.2.2. The Demand of Technology Professionals
  - 1.2.3. Competencies to Create Technological Solutions
  - 1.2.4. Best Practices in the Promotion of STEM Vocations
- 1.3. Information Management and Knowledge Communication
  - 1.3.1. Searching and Retrieving Information: Search Engines, Social Bookmarking and Aggregators
  - 1.3.2. Databases and Repositories for Teachers and High School Students
  - 1.3.3. Knowledge Management Resources
- 1.4. Generate and Distribute Knowledge with ICT Communication with ICT in Technology
  - 1.4.1. Tools for Content Generation
  - 1.4.2. Means for Content Distribution
  - 1.4.3. Production and Editing of Multimedia Material
  - 1.4.4. Social Media. Microblogging
  - 1.4.5. Content Curation
  - 1.4.6. The Teacher as Community Manager
- 1.5. Evolution of Technological Education
  - 1.5.1. What are PLE and What Are They For?
  - 1.5.2. Applications and Tools
  - 1.5.3. Digital Identity and Its Management





- 1.6. Tools for the Creation and Management of Educational Virtual Communities
  - 1.6.1. Building Collective Intelligence: Virtual Communities
  - 1.6.2. Types and Examples of Virtual Communities
- 1.7. Free Software in Education E-Learning Platforms Mobile and Ubiquitous Pedagogy
  - 1.7.1. Free Software Educational Applications
  - 1.7.2. E-Learning Platforms Examples of Use
  - 1.7.3. B-Learning in High School and Vocational Training
  - 1.7.4. Mobile Learning
  - 1.7.5. Tablets and Smartphones
  - 1.7.6. Learning Management with App Mobile Application Creation
  - 1.7.7. Strengths and Weaknesses of the Use of Mobile Applications in the Classroom
- 1.8. Criteria for the Selection of Educational Tools Instructional Design with ICT
  - 1.8.1. Design of Educational Tools
  - 1.8.2. Main Criteria for the Selection of Educational Tools
  - 1.8.3. Essential Aspects of Instructional Design
  - 1.8.4. Design of an ICT-Supported Classroom Training Proposal
  - 1.8.5. Design of Materials and Resources: Tools
- 1.9. Creativity Management and Emotional Intelligence in Technology
  - 1.9.1. Creative Thinking
  - 1.9.2. Creativity and Problem Solving in Technology
  - 1.9.3. Methods for Developing Creativity
  - 1.9.4. Some Resources
  - 1.9.5. Emotional Intelligence, Its Elements and Ways of Manifestation
  - 1.9.6. Importance of Emotional Intelligence Management
  - 1.9.7. Implications of the Development of Emotional Intelligence in the Teacher's Practice
  - 1.9.8. Techniques and Strategies for the Development of Emotional Intelligence Inside and Outside the Technology Classroom
- 1.10. Nature as An Inspiration for Technological Development
  - 1.10.1. Nature as An Inspiration for Technological Development
  - 1.10.2. Planned Obsolescence
  - 1.10.3. Examples and Best Practices with Technology

05

# Methodology

This training program offers 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"*

## At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program students will be presented with multiple simulated cases based on real situations, where they will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

*With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



*It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.*

“

*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. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
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.

Our University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*Educators will learn through real cases and by solving 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 we have trained more than 85,000 educators with unprecedented success in all specialties. 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 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 our 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 specialist educators who teach the course, specifically for the course, so that the teaching content is really 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.



#### Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### 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 multimedia content presentation training Exclusive system 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 your goals.



**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.



**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 Disciplinary Training in Technology and Computer Science guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



The image features two black graduation caps (mortarboards) against a blue sky with light clouds. The caps are positioned diagonally, with one in the foreground and another slightly behind it. The background is split into a white lower-right section and a red upper-right section. The quote is located in the white section.

“

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

This **Postgraduate Certificate in Disciplinary Training in Technology and Computer Science** contains the most complete and up-to-date educational 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 Disciplinary Training in Technology and Computer Science**

Official N° of Hours: **150 h.**



\*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.

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**  
Disciplinary Training in  
Technology and  
Computer Science

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

Postgraduate Certificate  
Disciplinary Training  
in Technology and  
Computer Science